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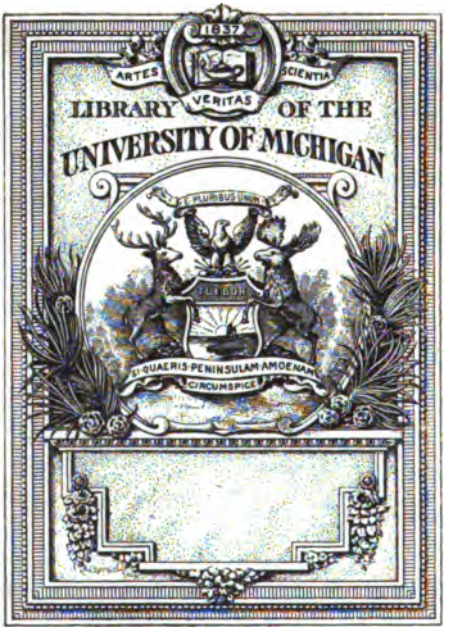
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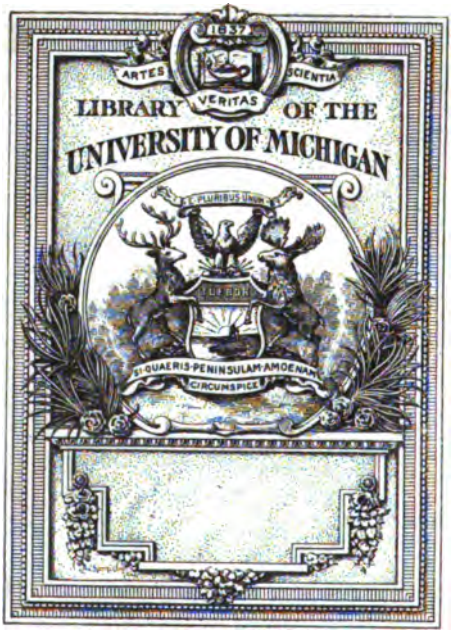
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REPORTS

36195

FROM THE

CONSULS OF THE UNITED STATES.

VOL. XXIII.

JULY-SEPTEMBER, 1887.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1887.

REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 81.—JULY, 1887.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1887.

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Name.	Country.	United States equivalent.
Arroba	Spain	25½ pounds.
Barrel	Denmark	1.4 acres.
Catty	China	1⅓ pounds.
Centner, metric		110 pounds.
Franc	France	$0.193.
Hectoliter, metric		26.418 gallons.
Kilometer, metric		3,280.899 feet.
Lira	Italy	$0.193.
Mark	Germany	$0.240.
Peseta	Spain	$0.193.
P cul	China	133⅓ pounds.
Pound	England	$4.8666.
Sol	Peru	$0.9650.
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CONSULAR REPORTS

ON

COMMERCE MANUFACTURES ETC.

No. 81--JULY, 1887.

THOMAS SLAG AS A FERTILIZER.

REPORT OF COMMERCIAL AGENT SMITH.

It may not be generally known to the American public that the slag obtained in the working of crude iron, which was formerly regarded as a refuse article to be got rid of in the best way possible, cast upon hillsides and thrown into streams of water, has in the last three or four years come to be recognized in Germany as a valuable fertilizing agent and an excellent substitute for superphosphates. Four years ago this stuff was, I believe, considered as worthless; to-day 4,000,000 centners (400,000 English tons) of it are ground into a fine powder to be scattered over the fields of Germany to increase the products of the husbandman. Wonderful, indeed, seem the claims that are made for it.

WHAT IS THOMAS SLAG?

In pig-iron much phosphorus is met with, which must be removed when the iron is converted into steel or forged. The freeing of this phosphorus from the rough iron was formerly a matter of much difficulty, but is now very satisfactorily done by an improvement of the Bessemer process, discovered by Messrs. Gilchrist and Thomas, of England. The slag obtained in this process is denominated Thomas slag, and is rich in phosphoric lime. From it the iron is separated, and the slag then broken up, sifted, and finely ground into dust, powder, or meal, which is put upon the market as a fertilizer. This product is said to be generally made up of about 16 per cent. of phosphoric acid, 50 per cent of lime, 12 per cent. of oligist iron and oxidized iron, and 7 per cent. silicic acid; but the phosphoric acid can run from 10 to 25 per cent. Under the name of patent phosphate meal, a dust, meal, or flour is given to the public made out of manipulated Thomas slag, which contains from 24 to 28 per cent. phosphoric acid.

Up to two years ago it was not believed that the crude Thomas slag finely ground could be used as a fertilize . It was thought that it would not easily enough dissolve. A closer study of the characteristics of Thomas phosphate meal led to a change of these views, however, and to the conclusion that by simply reducing the rough

material to a fine powder or dust a more effective fertilizer is obtained than from bone dust or even raw Peruvian guano. All that is done to the slag is simply to grind it to a powder as fine as dust.

The German iron works make about 4,000,000 centners (400,000 English tons) of Thomas slag a year, which can be sold to the farmers, when reduced to a dust, at a price one-third of superphosphate, containing an equal quantity of phosphoric acid. To fix the relative value of Thomas slag, in comparison to other fertilizers, is, of course, determinable only by painstaking experiments, and to such a work Professor Wagner, in charge of the experimental agricultural office at Darmstadt, a Government institution, seems to have devoted himself with great zeal and fidelity, and has published a treatise on this new fertilizer, upon which this report is based.*

PROFESSOR WAGNER'S EXPERIMENTS.

Phosphoric acid, says Professor Wagner, dissolves in water the less readily and is taken up by the roots of plants with the greater difficulty in proportion to the lime it contains. In superphosphate, for each 100 pounds of phosphoric acid there are 40 pounds of lime. The superphosphate easily decomposes in water, therefore. In precipitated phosphate of lime there are 80 pounds of lime to the same quantity of phosphoric acid and the solubility is much less than that of superphosphate.

Bone dust, "*phosphoritmehl*," and guano phosphates have a phosphate of lime containing 120 pounds of lime to every 100 pounds of phosphoric acid, and this phosphate, as is well known, can hardly be dissolved in water. In Thomas slag a phosphate is met with in which for every 100 pounds of phosphoric acid there are not less than 160 pounds of lime, but there is a hypersaturation of phosphoric acid with lime, and they do not adhere strongly together. Plants can very easily, therefore, take up the phosphoric acid contained in Thomas slag, and it is not necessary to mix it with acids to make a superphosphate, or to extract it with muriatic acid and to precipitate the product with lime. All that is necessary, as said before, is simply to grind the slag to a fine dust or powder.

CONDITIONS OF THE EXPERIMENTS.

The relative value of Thomas slag to other fertilizers cannot be fixed with accuracy, says Professor Wagner, by experiments in the open field. It is impossible to have the necessary conditions the same for each fertilizer brought into an experiment. It is difficult to find parcels of ground like one another all in all. The measuring and dividing of them off, the working, manuring, sowing, and harvesting of them, as well as the fixing of the weights of the products realized, cannot possibly be the same in each instance.

Then come the many dangers and influences to which plants growing in the open field are subject from insects, moles, mice, birds, and the weather. The differences in increased products cannot, therefore, be always traced back to the fertilizer used, where soil, heat, light, moisture, space for growing, insects, &c., play such an important part. Professor Wagner cites a number of cases of experiments

*Die Thomasschlacke, ihre Bedeutung und Anwendung als Düngemittel. Von Prof. Dr. Paul Wagner, Vorstand der landwirthschafftlichen Versuchsstation Darmstadt, 1887. 'Zweite Auflage.

made by others in the open field to show the truth of his position, which I do not think it necessary to give. The proposition is too self-evident.

In making his experiments Professor Wagner takes different appliances, according to the question that is to be answered. In part he uses cylinders open at the top and bottom (133 centimeters long and 60 to 100 centimeters in diameter, about 51 inches long and 25 to 38 inches in diameter), made of zinc, buried in the earth up to the rim and filled with the soil with which the experiment is to be made. Each cylinder thus contains a parcel of earth, which differs from a field experiment in this, that it is very small and fulfills all the requirements for an exact experiment. The soil used in each case of a comparative experiment is always one carefully mixed, of precisely the same characteristics throughout, with the materials disposed in the same way, quality of fertilization the same, seed sown in the same manner and at the same depth, number of plants and their distance from one another the same, &c.

These parcels are perfectly separated from the surrounding ground to a depth of 133 centimeters (51 inches). Every injury to the product can be provided against without loss and the product fixed with exactness. In experiments made in the open field these conditions cannot be controlled. They can also be made independent of all underground influences.

Besides these cylinders he also makes use of free and movable vessels constructed of tin, consisting of different sizes, and holding from 17 to 770 pounds of earth, the largest of which are put upon rollers. The smaller ones stand upon wagons 4 meters (about 13 feet) long, resting upon rails, so that they can be run under cover when a storm threatens or frost is feared. Of these vessels Professor Wagner says he has 650, and of the cylinders mentioned 260.

RESULTS.

Now what results did Professor Wagner meet with in his experiments? During the past three years he made a number of experiments at the experimental office at Darmstadt, in co-operation with four other gentlemen, not with a view to gratify theoretical scientific curiosity, but for the purpose of serving the practical farmer, in which experiments both the kinds of vessels mentioned were employed. For the first trials a Thomas-slag powder was used, for every 100 parts of which only 51 would pass through a sieve made of wire, with openings measuring 0.2 to 0.24 millimeters on the side and 0.35 to 0.37 millimeters diagonally. The tests were made with oats and barley on soil containing lime, of a loamy character, on sandy soil poor in lime, and on calcareous soil, in vessels holding 35 to 39 pounds of earth; and the fertilizing was done in the following manner:

All the vessels received a superfluity of kali (potash) and nitrogen, in order to bring the phosphoric acid to full working everywhere. There were 6 vessels which received no fertilization with phosphoric acid, 2 by 5 which got a rising fertilization of soluble phosphoric acid in the form of a bone-ash superphosphate—that is, a fertilization equivalent to 88, 121, 154, 187, and 220 pounds of phosphoric acid a hectare (2½ acres)—and 2 by 5 which had a rising fertilization of ground Thomas-slag in the same proportions.

All factors which could influence the growth of the plants in any way were most carefully equalized, so that any difference in product

could be traced exclusively to a difference in the operation of the phosphoric acid.

The average results of the single rows were as follows:

Fixing the greater product realized by the use of phosphoric acid soluble in water at 100, the greater product obtained by the use of an equal amount of phosphoric acid in Thomas slag will be—

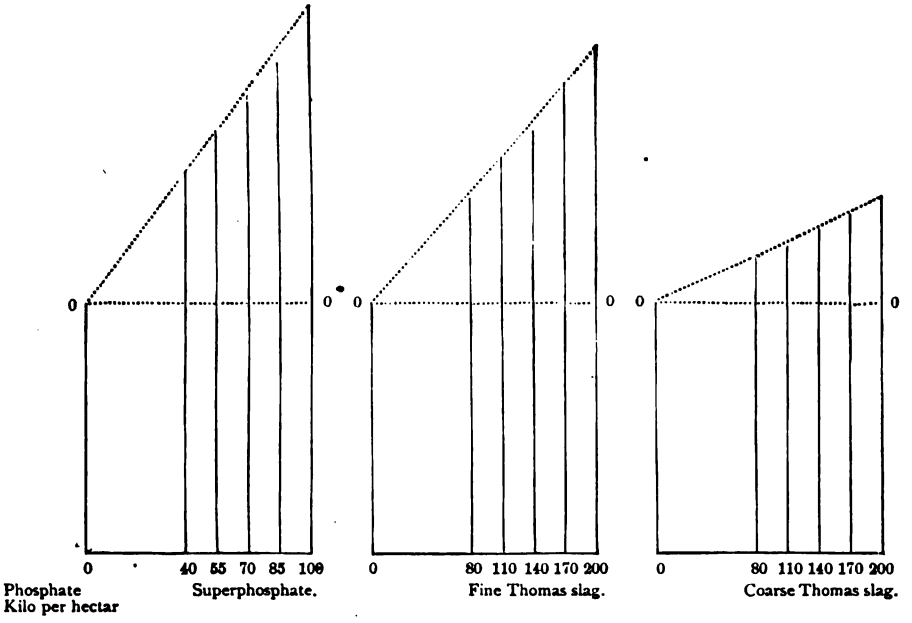
In the case of the experiments with barley on sandy soil	22
With experiments with the same plant on calcareous soil	18
In the case of experiments with oats on loamy soil	18
With respect to barley on loamy soil	20
Average result	19

The effect of Thomas slag compared to that of superphosphate was thus slight. The slag experimented with was too coarse. Experiments in the laboratory then convinced Professor Wagner that the phosphate contained in Thomas slag is decompoundable, and that the efficacy of the ground slag would probably be greater in proportion to the fineness of the grinding. This conclusion subsequent trials, made in 1885, confirmed. This time a slag was employed of which 98 per cent would pass through a sieve measuring 0.2 millimeters, and in connection with it a slag possessing grains 0.2 to 0.4 millimeters in diameter. To make the trials, turfy ground, sandy soil, loamy soil, and a calcareous soil were chosen, and white mustard, Indian corn from Baden, and a mixture of meadow grasses. All the other circumstances under which the experiments were carried out were the same as those just above mentioned. The turfy and calcareous soils contained such a large amount of phosphoric acid that could be easily taken up by the plants that the increased product brought about by the application of Thomas slag and superphosphate was slight, and Professor Wagner cast them aside as valueless. The experiments with white mustard on a sandy soil, poor in humidity (containing 0.6 per cent of carbonate of lime), and on a loamy soil (containing 2.1 per cent of carbonate of lime) gave very exact and reliable results.

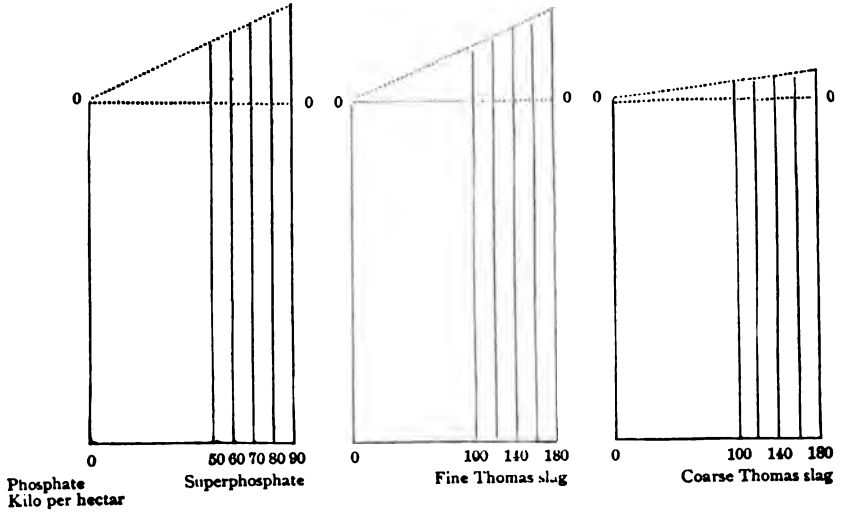
The following table shows the average results:

Experiments with white mustard on sandy and loamy soils.

Phosphoric acid given in the form of—	On sandy soil.		On loamy soil.	
	Reckoned amount of phosphoric acid per hectare.	Products in dry substances.	Reckoned amount of phosphoric acid per hectare.	Products in dry substances.
	Kilograms.	*Grams.*	*Kilograms.*	*Grams.*
Superphosphate	40	16.8	50	173.8
	55	18.7	60	180.7
	70	20.1	70	186.0
	85	22.0	80	187.7
	100	24.4	90	196.0
Fine Thomas slag	80	15.7	100	174.5
	110	18.0	120	178.0
	140	18.8	140	182.5
	170	20.9	160	182.0
	200	22.7	180	190.5
Coarse Thomas slag	80	13.4	100	158.2
	110	13.6	120	160.4
	140	14.4	140	168.0
	170	15.2	160	164.0
	200	16.2	180	164.8
		11.2	0	151.5



WHITE MUSTARD IN LOAMY SOIL.



The number of parallel experiments amounted to three in the case of each fertilization with phosphoric acid, and to five where there was none.

Professor Wagner deduces from these experiments this, that with great regularity the products increased in quantity in proportion to the amount of phosphoric acid applied, and claims that from these sums he is justified in making an exhibit like the following as an average calculation·

White mustard in sandy soil.

Adding the fertilizers and the incr ased products obtained by their use, the following exhibit is acquired:

[480 grains to an ounce.]

Fertilizer.	Sandy soil.				Loamy soil.			
	Amount of fertilization.		Increase in product.		Amount of fertilization.		Increase in product.	
	Kilos.	*Pounds.*	*Grams.*	*Grains.*	*Kilos.*	*Pounds.*	*Grams.*	*Grains.*
Superphosphate	350	771.4	46	709.8	350	771.4	166.7	2,572.5
Fine Thomas slag	700	1,542.8	40.1	618.8	700	1,542.8	150.	2,314.8
Coarse Thomas slag	700	1,542.8	16.8	259.2	700	1,542.8	52.9	816.3

Supposing the products got by superphosphate fertilization equal 100, the following results arise:

Fertilizer.	Sandy soil.	Loamy soil.	Average from sandy and loamy.
Fine Thomas slag	49	45	47
Coarse Thomas slag	20	16	18

From this average result he draws the conclusion that in order to realize the same effect with phosphoric acid in the form of Thomas slag, with the first crop following a fertilization that is produced by one part of phosphoric acid soluble in water, requires 2.1 parts of phosphoric acid in the form of fine Thomas slag, or 5.6 parts of phosphoric acid in the form of coarse Thomas slag. Therefore their relative value per pound is as 50 to 24 in the case of fine Thomas slag, and as 50 to 9 in the case of coarse, the 50 representing the value of the soluble phosphoric acid; that is, when reference is had solely to the immediate effects of the fertilization upon the first crop following its application and not to its subsequent and lasting effects at the same time.

EXPERIMENTS OF 1886.

In 1886 Professor Wagner made further experiments in order to ascertain the relative merits of the phosphoric acid contained in Thomas slag of various degrees of fineness with that lodged in superphosphates, in raw, ground Peruvian guano, in steamed bone-dust, and in "coprolithenmehl."

The trials were as follows:

I. One row of 46 single experiments with barley in vessels containing a sandy loam possessing 1.9 per cent. of carbonate of lime.

II and III. Two rows of 46 and 47 single experiments with summer wheat and flax in vessels holding a loamy earth ("wheat soil") having 6.5 per cent. of carbonate of lime.

IV. One row of 85 single experiments with oats in cylinders containing a soft porous soil with 31.2 per cent. of carbon of lime.

The fertilization was as follows:

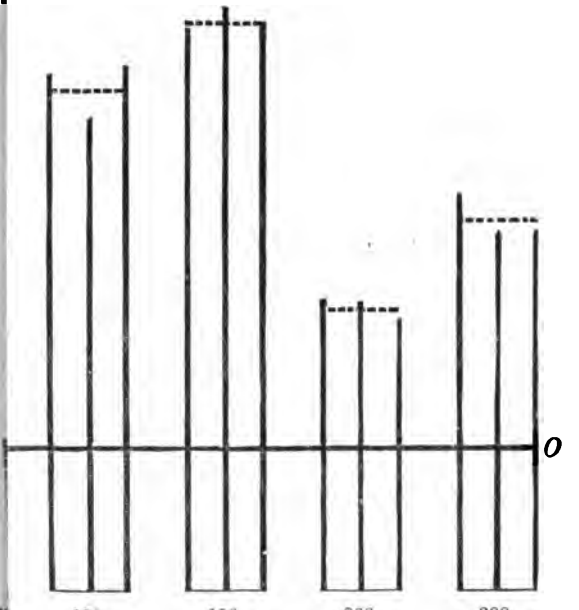
Kind of fertilizer.	Degree of fineness of fertilizers.				Percentage in the fertilizer of—		
	Grains to 0.1 millimeter.	Grains from 0.1 to 0.2 millimeter.	Grains from 0.2 to 0.4 millimeter.	Grains from 0.4 to 1.0 millimeter.	Phosphoric acid soluble in water.	Entire phosphoric acidity.	Nitrogen.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Superphosphate	.....	.....	.....	.....	18.74	19.1	.....
Raw Peruvian guano	.....	.....	.....	.....	.....	19.28	4.34
Bone-dust	20	20	46	14	.....	20.43	3.97
Coprolithenmehl	100	0	0	0	.....	21.71	.....
Thomas slag:							
I.—Finest grinding	100	0	0	0	.....	20.35	.....
II.—Finely ground	88	17	0	0	.....	17.69	.....
III.—Coarsely ground	0	52	48	0	.....	17.6	.....

All the elements requisite to the nourishment of the plants, with the solitary exception of phosphoric acid, were present in excess. Alkali and nitrogen were present in the form of nitrate of potash and nitrate of ammonia.

The parcels were only watered when, during a dry spell, the atmospheric precipitations did not suffice to protect the plants from withering. Each parcel then received the same quantity of water.

The earth with which the vessels were filled contained the normal moisture of 15 per cent. of water. So soon as this amount sunk to 10 or 8 per cent., the earth was given as much water as it was considered the plants required until the next measurement or weighing, and as was conceived necessary for the water to get distributed through the entire mass of earth. And no more water was supplied until the amount of moisture had sunk to the limit above mentioned.

The harvesting took place when the barley, &c., were almost too full grown, and in the case of flax at the beginning of the ripening of the seed. The fixing of the fertilizing efficacy of the phosphates on the one hand after a half-completed vegetative period, and on the other with completed vegetation, was so far interesting that thereby a basis was obtained for determining the rapidity or slowness with which the phosphates worked. A phosphate quickly operating would give in a short space of time a higher product than one working slowly, while may be both phosphates would give the same results if permitted to work upon the plants during a longer period of growth. This was very plainly shown in the case of flax. Thomas slag of quality I (finest grinding) had a much better effect, for instance, in all the parallel trials during the first six weeks of vegetation than slag II, but after the six weeks were passed the relative difference disappeared more and more until by the time of harvest both qualities exhibited pretty much the same results.



3 Millimetre = 1 grain*** of product.

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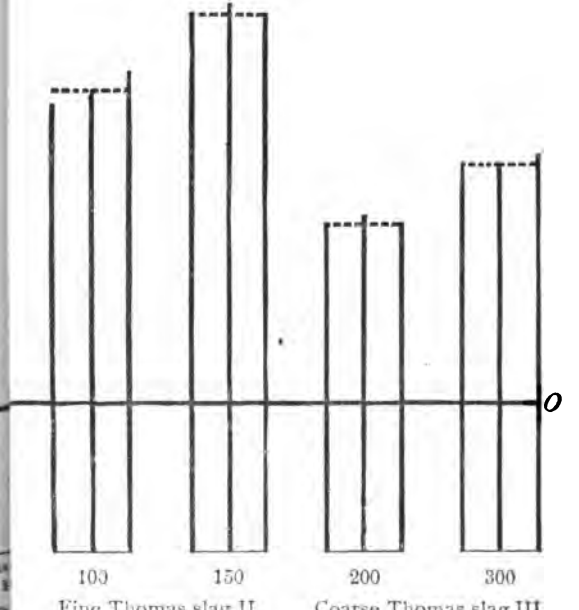

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The following table shows the phosphoric acid fertilization and the products obtained in cases I, II, and III:

Fertilizer.	Phosphoric acid fertilization per hectare.	Products in dry substances.					
		I.—Barley.		II.—Wheat.		III.—Flax.	
		Products of the parallel experiments.	Average of the parallel experiments.	Products of the parallel experiments.	Average of the parallel experiments.	Products of the parallel experiments.	Average of the parallel experiments.
	Kilog'ms.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
	0	11.01		6.90		18.68	
	0	11.31		6.12		19.35	
.....	0	11.50	11.4	6.11	6.5	21.04	20.1
	0	11.62		7.01		19.63	
	0	.....		.....		21.78	
	50	23.87		19.31		59.36	
	50	24.45	24.5	18.76	19.5	55.61	57.4
Superphosphate	50	25.30		20.47		57.14	
	75	28.06		26.76		67.52	
	75	30.04	29.1	25.25	25.8	66.78	68.3
	75	29.33		25.42		70.62	
	100	20.12		10.04		43.26	
	100	20.41	20.1	18.64	14.0	41.76	43.9
Raw Peruvian guano	100	19.83		14.43		46.79	
	150	21.61		18.80		53.96	
	150	23.12	22.6	17.18	17.8	55.14	54.3
	150	22.97		17.57		53.79	
	150	15.88		10.53		30.44	
	150	14.98	15.2	9.13	9.7	33.38	31.6
Steamed bone-dust	150	14.75		9.86		30.83	
	200	17.51		12.49		34.15	
	200	16.72	17.2	10.82	11.9	36.18	35.2
	200	17.36		12.27		35.20	
	150	14.83		9.94		29.08	
	150	15.06	14.8	10.06	9.9	29.78	30.0
Coprolithenmehl	150	14.58		9.58		31.11	
	200	15.47		12.49		35.12	
	200	16.01	15.6	11.06	11.3	35.12	35.7
	200	15.41		10.35		36.98	
	100	23.10		21.09		65.33	
	100	22.20	23.5	24.00	22.4	61.58	62.8
Thomas slag, finest grinding...	100	26.30		22.25		61.46	
	150	29.54		25.55		68.26	
	150	30.06	29.4	26.14	25.8	70.13	69.6
	150	28.70		25.80		70.46	
	100	26.21		23.06		59.72	
	100	26.00	26.8	21.09	22.5	60.84	61.5
Thomas slag, fine grinding.....	100	26.20		23.45		64.00	
	150	29.02		24.92		71.68	
	150	30.41	29.5	26.95	25.4	72.61	71.6
	150	29.10		25.22		70.58	
	200	17.80		12.92		44.14	
	200	18.10	18.0	13.00	12.6	44.78	44.2
Thomas slag, coarse grinding..	200	18.02		11.97		43.75	
	200	21.41		17.51		52.22	
	200	20.20	20.9	16.21	16.6	52.17	52.5
	200	21.02		16.07		52.99	

The results obtained in the case of IV Professor Wagner cast away as unsatisfactory, as, in consequence of the soil containing too much phosphoric acid, the greater products realized were not sufficiently large to give perfectly exact results. The experiments I to III, on the other hand, resulted in decided increased products from the phosphoric-acid fertilization, and, as is to be seen from the tables, the results of the parallel trials are in such agreement that they could be used, without any exception, for making an average calculation. To give a comparative and clear exhibit of the results he achieved, Professor Wagner has prepared a table showing by lines the relative amounts of the products, which can be glanced over much quicker than figures.

This table speaks for itself without further explanation. The upright lines give the results of the single experiments, the dotted horizontal lines their average product. The products realized in the case of unfertilized parcels (f.ee of phosphoric-acid fertilization) are given in broken lines, and the average product of such is indicated by a horizontal line crossing all the products, whereby the eye takes in at once the degree of increased production.

By his former labors, says Professor Wagner, it was established that the increased product arising from fertilization with phosphoric acid increases in proportion to the increase in fertilization, as all other vegetative factors are present in excess. That the products of the parcels similarly fertilized agree is not enough. The average result he regards as useful only when it can be proved that the fertilization has not met with any hindrance in its operation, and this can only be fixed by the principle just expressed.

Keeping in view the foregoing tables, it will be seen that the stronger fertilization (75 to 150 kilograms) with superphosphate—Thomas slag I and Thomas slag II—does indeed show a regular increase in the products as compared to the lighter use of the same phosphates, but the advance was, on the whole, slighter than it should have been if the fertilization had come into full operation. A calculation clearly shows this, for if the corresponding products of the three rows of experiments are added up the increased fertilization with superphosphate—Thomas slag I and Thomas slag II—shows greater products of 133, 125, and 126 grams, respectively, while they should have rendered 133, 151, and 147 according to the rule. With the other fertilizers the result came truer, and the increase was in the same degree in the case of both the strong and the weak, as guano, bone-dust, coprolith, and coarse Thomas slag gave with a strong fertilization 95, 64, 63, and 90 grams, when, according to rule, they should have given 98, 63, 62, and 93.

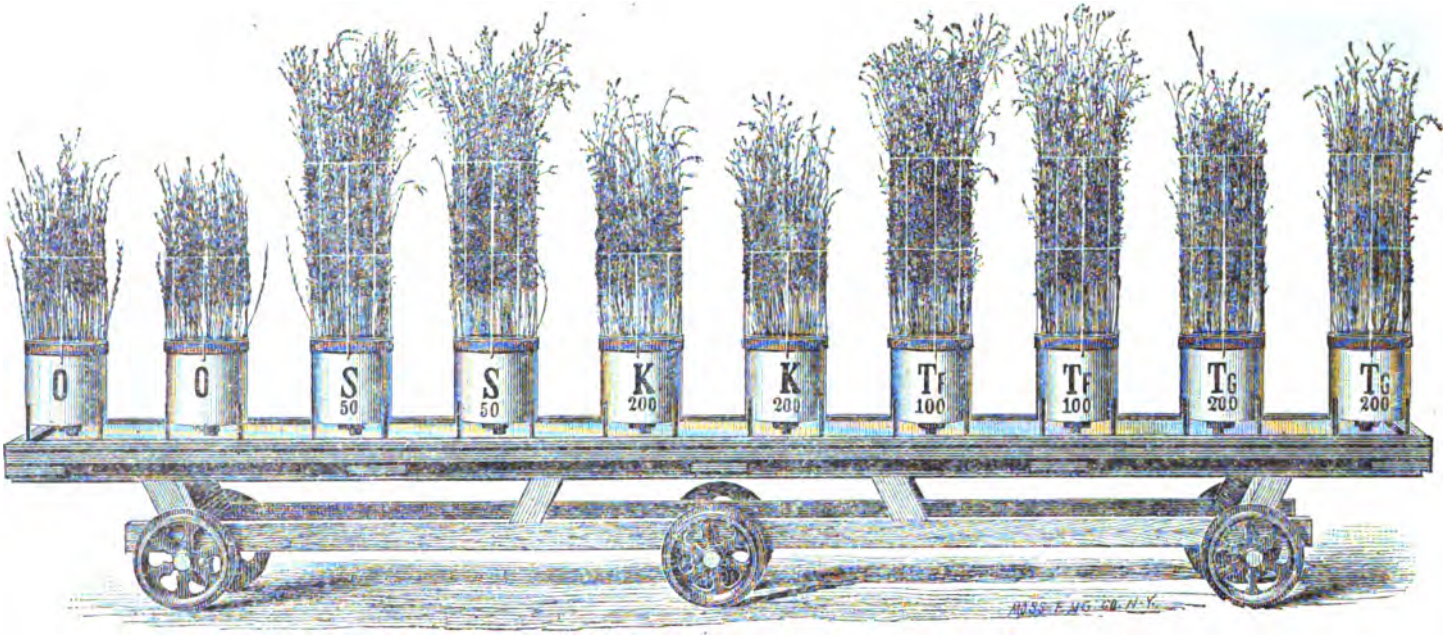
Leaving out of consideration the products brought about by the stronger fertilization, and using only those reliable average ones produced by the weaker fertilization in the case of the superphosphate—Thomas slag I and Thomas slag II—while employing the results of the stronger fertilization in the case of the other fertilizers as well as those derived from the weaker, and setting the average result with superphosphate at 100, we get for the other phosphates the following figures:

Fertilizer.	Trial row I, barley.		Trial row II, wheat.		Trial row III, flax.		General average of all the rows and fertilizers.
	Weak fertilization.	Strong fertilization.	Weak fertilization.	Strong fertilization.	Weak fertilization.	Strong fertilization.	
Superphosphate	100	.....	100	.....	100	.....	100
Raw Peruvian guano	33	28	29	29	32	31	30
Bone dust	10	11	8	10	10	10	10
Coprolithenmehl	9	8	9	9	9	10	9
Thomas slag:							
I.—First quality	65	.....	61	.....	57	.....	61
II.—Fine grinding	59	.....	61	.....	55	.....	58
III.—Coarse grinding	13	11	13	13	16	15	13

Says Professor Wagner:

These results exhibit a surprisingly exact agreement. Whether barley, wheat, or flax served as the experimental plant; whether a sandy loam with 1.9 per cent of

Consular No. 81.—(To face page 9.)



EXPERIMENTS WITH THOMAS SLAG.

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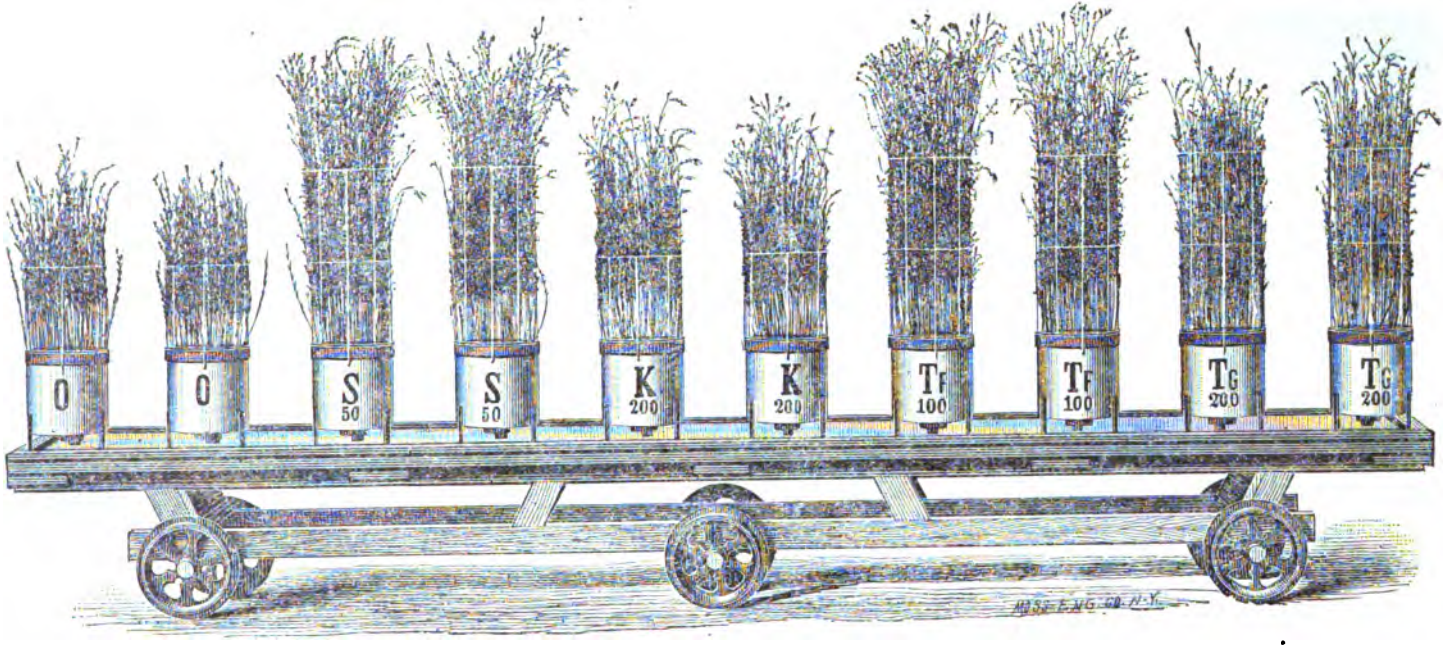

EXPERIMENTS WITH THOMAS SLAG.

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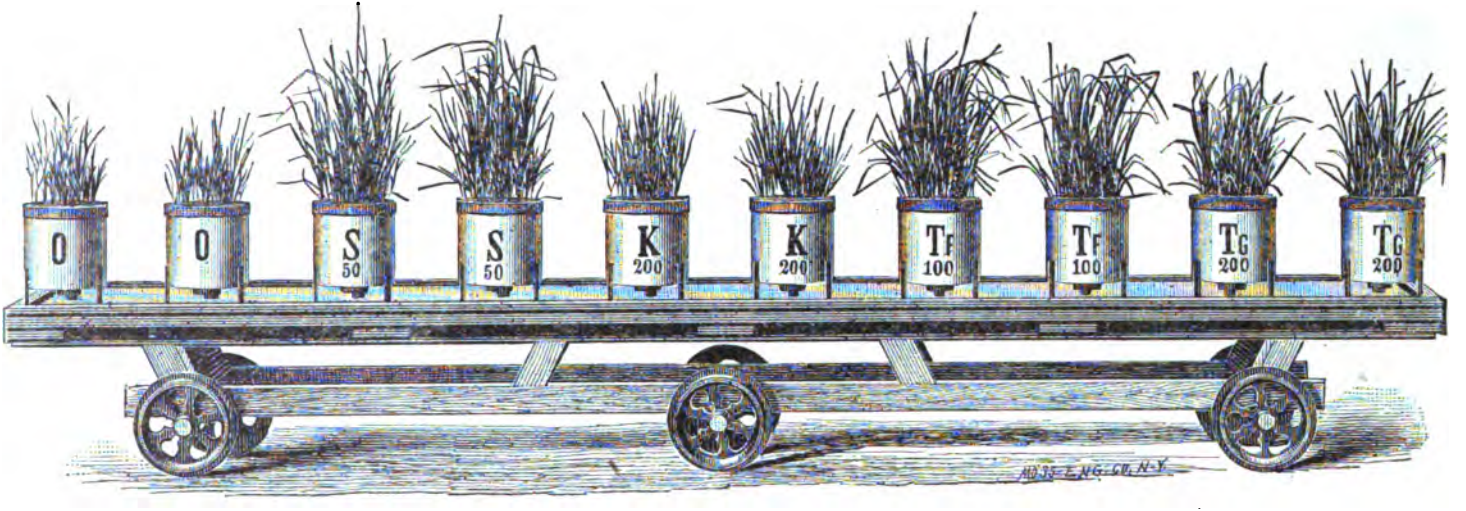

EXPERIMENTS WITH THOMAS SLAG.

carbonate of lime or a heavier loam (wheat soil) with 6.5 per cent of carbonate of lime was used, the effect of the different phosphates has remained the same under all circumstances.

In order to show with distinctness to the eye the regularity with which the plants grew in the parallel rows according to difference of fertilization, Professor Wagner had some of the vessels, with their plants, of trial rows II and III (flax and summer wheat) photographed and then lithographed. The picture they present is as follows:

What value, then, as a fertilizer has the phosphoric acid of Thomas slag in comparison to superphosphate and other fertilizers containing phosphoric acid? Professor Wagner says that the result of his experiments with the three different kinds of plants and the two different kinds of soil is this, that if the fertilizing value of phosphoric acid in superphosphate when soluble in water is fixed at 100 the value of the phosphoric acid is as follows:

Raw Peruvian guano	30
Steamed bone dust	10
"Coprolithenmehl"	9
Thomas slag:	
I.—First quality	61
II.—Medium quality	58
III.—Coarse quality	13

The Peruvian guano was only one-third as efficacious and the bone dust one-tenth as the superphosphate, while the finely ground Thomas slag operated twice as well as the phosphoric acid in the guano and six times as well as the phosphoric acid in the bone dust. It is possible that the guano and bone dust would have shown an intenser effect if they had been longer in the ground, say from the autumn, but Professor Wagner does not think that a very material improvement would have taken place. Consequently, Thomas slag during the first three months of vegetation after its use gives twice as great a product as phosphoric acid in raw Peruvian guano and six times as much as the phosphoric acid in steamed bone-dust.

Superphosphate phosphoric acid forms the proper basis, the professor says, for the determination of the fertilizing value of the phosphoric acid contained in Thomas slag. The farmer must know what he can pay for one pound of Thomas phosphoric acid when a pound of soluble phosphoric acid in superphosphate costs a certain sum. Taking the results that have been obtained, when the soluble phosphoric acid in superphosphate is put at 100, the fertilizing value of the phosphoric acid in Thomas slag I will be 61; II will be 59; III will be 13.

The efficacy of the slag, it appears, depends largely upon the fineness of the grinding. It must be dust fine to be highly effective. Upon this point Professor Wagner seems to think that too much stress cannot be laid. The slag denominated I must be so fine that it can be rubbed between the fingers like flour and pass through a sieve with 0.1 millimeter openings without leaving any remains; but only during the first six weeks of vegetation did it work with Professor Wagner better than slag designated as II, and at the end of three months the latter caught up to the former. He, therefore, draws the conclusion that for all practical purposes the latter is plenty fine enough, and, as its manufacture costs less than the I, is to be preferred. Quality II is made up of 83 per cent. passing through openings 0.1 millimeter in size and 17 per cent. possessing grains 0.1 to 0.2 millimeter in size. All that is left behind in a sieve with openings

0.2 millimeter large is named coarse slag or slag III. What passes through a sieve with 0.2 millimeter openings we will call fine powder, and that part of this powder which goes through openings 0.1 millimeter in size, dust, while what remains in the sieve with openings 0.2 millimeter large we will term coarse powder.

Fine powder, says Professor Wagner, that is, Thomas slag II, that consists of 80 per cent. of dust, contains phosphoric acid in such a soluble form that 100 pounds of it in the first year after application is equal in effect to 60 pounds of the phosphoric acid in superphosphate; but there must be at least 80 per cent. of the so-called dust (that is, slag which will pass through a sieve with openings 0.1 millimeter in size), otherwise the effect will be much less. Such a slag (80 per cent. dust and 20 per cent. fine powder) has the following value in comparison to superphosphate containing the same quantity of phosphoric acid: 100 parts of coarse powder (Thomas slag) compared to 100 parts of superphosphate have a value of 13 or 20 parts of coarse powder (20×0.13), the value of 2.6; 100 parts of fine powder compared to 100 parts of superphosphate have a value of 60 or 80 parts of fine powder (80×0.6), the value of 48.0. Total, 50.6.

Fixing, then, the fertilizing value of the phosphoric acid in superphosphate at 100, the phosphoric acid in ground Thomas slag (20 per cent. of coarse powder and 80 per cent. of fine powder) has a value in round numbers of 50; that is, in the first summer after application in the spring two pounds of the Thomas slag of the degree of fineness in question is equal to one pound of superphosphate; or, in other words, such a Thomas slag, costing 45 cents a pound, is more valuable to the farmer than superphosphate at $1 a pound, assuming that two pounds of the former are required where one pound of the latter answers.

The form in which phosphoric acid is contained in Thomas slag seems to be far more decomposable and much more easily taken up by the roots of plants and more easily dissolved by water and acids than the phosphoric acid held by mineral phosphates. Chemical experiments, Professor Wagner says, prove this.

Can the iron contained in Thomas slag have any prejudicial influence upon plants? It cannot, says Professor Wagner, and the fear that it may have a deleterious effect he considers unwarranted.

Under what conditions and in what manner is this new fertilizer best employed? Professor Wagner's experiments with a loamy soil (wheat soil) of an ordinary limy character and with a sandy loam, poor in lime, agreed in showing that Thomas slag works upon them much more quickly than bone dust and Peruvian guano do. Other experiments made before this by him on the same kinds of soil, but with a phosphate dissolvable with much greater difficulty, that is, ground apatite (compact phosphate of lime), showed next to no effect, while upon marsh land it exhibited a very satisfactory result. It is, therefore, to be taken for granted that a marshy soil dissolves and takes up the elements in phosphates with much greater readiness than farm land, and that Thomas slag would operate with greater rapidity and more intensity upon it than upon farm land, and that for wet, boggy tracts Thomas slag is just the fertilizer to be applied in preference to all others of a phosphoric-acid nature. For meadow and marsh land it is just the thing.

According to Professor Wagner, meadow land in Germany has had a hard experience in the matter of fertilization. Such ground gets

too little nutrition and the fertilization is not scientific. It is, too, a mistake to fertilize such ground with dung water. It would be much better he thinks to give it to Indian corn, roots for fodder, rapeseed, winter grain, and the orchards, upon which the nitrogen in the water would be more valuably used than upon the meadow grasses and clovers, which are not so much in need of that as of phosphoric acid. The latter easily draw from the air all the nitrogen they need. And where a meadow does not have an immoderate supply of water, and yet does not lack in moisture, 500 to 600 pounds of kainit an acre put on the soil in combination with about 800 pounds of Thomas slag produces astonishing results, he says.

On meadow land the slag should be plowed in as deep as possible to make it effective for a series of years, as on the surface it works with too great rapidity and strength, and thus becomes wasted to a certain degree.

In vineyards and orchards, as well as in gardens and wherever the soil is deeply worked, the slag is very beneficial, and should be used. It provides a fine soil at a good depth for the plants to strike their roots into for life and moisture.

Each layer of earth of ¼ of a meter's thickness (about ¼ of a yard) should receive about 600 pounds of Thomas slag to an acre, Professor Wagner thinks, in the deeper layers of earth. Where the slag is used in ordinary farming in the place of a superphosphate formerly employed, double the quantity of the latter should be the slag.

JAS. HENRY SMITH,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Mayence, May 2, 1887.

FOREST CULTURE AND FOREST PRESERVATION IN NEW SOUTH WALES.

REPORT OF CONSUL GRIFFIN, OF SYDNEY.

The government of New South Wales has for many years been duly impressed with the necessity of taking active steps for the preservation of the useful timber trees of the colony. The soft, straight-grained woods, such as yellow and white pine, except in inaccessible places, are well-nigh exhausted. The white beech, cypress, and cedar trees are also becoming very scarce. The latter trees are seldom found except in the interior, and it is most difficult and expensive to convey them to market. Moreover, they are never met with in quantities. In fact, vast forests of one particular kind of tree, like the pine, spruce, or cedar of the United States, are unknown in this colony. Such trees, when found, are usually distributed amongst an almost endless variety of other kinds.

AREAS UNDER FOREST.

The forest area of New South Wales would probably not exceed 30,000 square miles out of a total area of 310,938 square miles. The forests proper are mostly confined to the water-shed lying east of the great dividing range de cordillera, which separates the eastern and

western water-sheds. This range has seven main branches, the highest peak of which is 7,300 feet, about 300 feet below perpetual snow.

The country east of the great dividing Range is estimated to contain 50,000 square miles, one-fourth of which probably consists of forests.

Pine trees, known as the Morton Bay pine, red or black Port Macquarie pine, Richmond white pine, white cypress pine, mountain pine, Blue Mountain pine, colonial deal, &c., are found in various parts of this colony, but, as I have said previously, this timber is difficult to reach, the country containing it being very rough, with high ranges and deep gullies. The principal woods of the colony, "Eucalypti," belong to the natural order *Myrtaceæ*. They are very hard and difficult to work and are generally known by the name of hardwoods.

On rich soil they grow to a greater height and produce better timber than on poor soil, but in most cases the wood is poor, and when it reaches maturity the heart becomes very brittle. The leaves are vertical and leathery, and afford little shade to the traveler.

Some varieties of the Eucalyptus make very good sleepers for railways and piles for bridges and wharves, but it does not at all compete with American lumber for building purposes, and it is extremely doubtful that it will ever come into general use. Some of the woods known as iron-bark and red-gum are deemed indestructible in moist ground. The latter is thought to be quite equal in strength and durability to the celebrated "jarah" of Western Australia, which is also a species of Eucalyptus. The "jarah," like all the hardwoods of Australia, is liable to decay in the center. The sound trees are said to yield useful and durable timber, and there is talk of exporting it to the United States for cabinet work. The wood is of reddish color, close in texture, and of slightly wavy grain. It is said to be admirably adapted to docks and wharves. It is impervious to the attacks of the *Teredo navalis* and white ant. The timber of the red-gum is characterized by considerable density and hardness. Like the "jarah," it is of close texture and wavy grain and is said not to shrink longitudinally. There are 47 varieties of the Eucalyptus in New South Wales and they are all characterized by lofty stems, thin branches, dull-colored foliage, wrinkled bark, and scanty undergrowth. The commonest amongst them are the box, stringy bark, blue-gum, red-gum, spotted-gum, gray-gum, messmate, peppermint, tallow-wood, iron-bark, mahogany, &c.

The best known of these trees is the celebrated blue-gum, *Eucalyptus globulus*. This tree grows to a greater height than any other in the world, and sometimes rises to 200 feet before sending out a branch. It reaches a greater height, however, in Victoria and Tasmania than in New South Wales. The highest ever felled in the latter colony was 360 feet, while in Victoria one was felled (at Healsville, 37 miles from Melbourne) measuring 480 feet (14 feet higher than the Strasburg Cathedral). The circumference of this giant of the forest was 100 feet. In Tasmania these trees not unfrequently attain a height of over 400 feet. Mr. Julian E. Tenison Woods, F. G. S., F. L. S., accounts for the great height of these trees as follows: First, the extreme richness and moisture of the vegetable soil; second, perfect absence of disturbance from the wind; and third, the comparative obscurity, or modified light, which causes the young plant to throw out but few branches or leaves until the light of day is

reached, which is often at a height of 100 feet or more above the root. The young leaves fall away and leave the tree still more bare as it grows up.

Mr. Wood says of these trees:

> Long bands of bark hang down from their sides and across their branches, and when set in motion by the wind, keep up a constant rattle and creaking, filling the gloomy forests with the strangest echoes and sounds. The great height of the trees would never be imagined from the aspect they present. As they always grow on very steep slopes, and never crown the summit of the ridges, their height is lost against the adjacent ranges. It is only when standing against their moss-covered stems, where the roots rise gracefully up around from the buttress-like base, twisting and turning round the bole-like massive moorings, that one gets an idea of their enormous size.

The timber of this tree is strong, heavy, and durable. Its transverse strength is equal to that of English oak. It is used to a limited extent for ship-building purposes, and for wagons, carriages, &c.

THE ACACIA.

There are about one hundred different varieties of the acacia in New South Wales. They are found in the open forests. The wood is of little value, but the bark is exported to various countries, where it is highly prized for tanning purposes. These trees are known by the generic name of "wattle." Their gum is utilized for commercial purposes, and the beautiful yellow flower the tree bears is used in the manufacture of perfume.

COMMON FORESTS AND PRIVILEGES OF POPULATION IN THEM.

With the exception of the government reserves, which include about 5,400,000 acres, all forests or Crown lands in New South Wales are common property, except for grazing purposes. The government reserves are, however, of a temporary character, and are reduced from time to time partly because upon careful examination they are found to contain little or no timber, and partly because the Government yields to the pressure brought against it to put the land up for sale. The Government also controls large areas of unreserved timbered lands, but when once sold it has nothing to do with the timber upon them. In most cases when land is sold the purchaser usually destroys the timber by ring-barking.

A special license is required to cut timber from Crown lands. The charge for a license is at the rate of 5*s*. ($1.20) for ordinary timber, and 10*s*. ($2.40) for cedar. Any person armed with a proper license can cut as much timber as he can remove from the land. No license is required by any one for the purpose of cutting fire-wood for his own use, or not intended for sale.

Rights to cut and remove timber from blocks within state forests are also sold by auction, or by tender, at an upset price of £10 ($48.66) per block of 640 acres per annum, for term of one year only, unless circumstances should justify the government in special cases extending the term to three years, and then, in addition to block rental, a royalty will be imposed.

Land can be obtained for grazing purposes from the government by paying an annual rental of not less than £2 ($9.72) per section of 640 acres. According to the land law of New South Wales for 1884, now in force, the government can let by tender or at auction, such lands as are not under lease, not to exceed 1,920 acres subject to rental,

for the whole year, if tenancy be created at any time of the year prior to the 30th of June, and for the half year's rental, if afterwards.

Lands thus rented, even after renewal, do not bar the area from sale, conditional or otherwise.

Scrub lands may be leased in areas of 10,240 acres maximum, and 640 acres minimum, for a term of fifteen years, subject to clearing conditions from time to time defined by regulations, at a minimum rental of 2*s.* 6*d.* (60 cents) per section for the first five years, and 5*s.* ($1.20) for the second five years, and £1 ($4.86) for the third five years.

Rental during any of the three five years may be remitted upon the recommendation of the local land board. No residence on scrub leases is required by the land act.

In the common forest no protection is afforded against the ravages of stock, and some of the edible trees, such as the "myall," "boree," the "oak," &c., will be exterminated, it is said, in a few years, as the stock eat all the young seedlings.

The myall is a species of acacia. It is found on the Salt Bush plains and on the Murray River, and from the Lachlan to the Barrier Range. The timber is hard, dark, and fragrant. It is suitable for cabinet work, and was formerly used by the aboriginal inhabitants for making spears.

The boree, known to science as *A. pendula*, is a very beautiful tree, attaining to a height of 40 feet, with diameter of 18 inches. The foliage is pale, or ash-colored. It is found on the Illawara, and Liverpool plains, and is said to be the only useful timber tree of the Lachlan morasses. The wood is hard, close-grained, and violet-scented. In the Blue Mountains the foliage is denser than in other parts of the colony. The reason of this is said to be the abundance of rich chocolate soil there produced by the decomposition of basaltic rock. In this soil are found some of the finest specimens of tree ferns, creepers, and orchids in the world.

ORGANIZATION AND FUNCTIONS OF GOVERNMENT FOREST BUREAU, ETC.

There is a forest conservatory bureau in Sydney attached to the department of mines. It has control of all the lumber cutting and planting. The field staff consists of 1 inspector, 28 forest rangers, and 10 assistants. It is the duty of the rangers to prevent, as far as practicable, the wasteful cutting of timber below a fixed girth on timber reserves. The department of lands has the power to create or revoke timber reserves. Permission to ring-bark timber on Crown lands is granted by the local boards and under such conditions as may appear advisable. Reports in regard to these matters are made by the rangers.

REVENUE FROM GOVERNMENT FORESTS, COST OF MANAGING FORESTS, ETC.

The expenditure for managing the Government forests in 1885 was, for the first time since 1877, in excess of the revenue. In 1885 the expenditure amounted to £18,145 17*s.* 6*d.* ($88,353.06); the revenue to £13,863 2*s.* 8*d.* ($67,464.90). In an official report it is stated that the falling off in the revenue is partly attributed to the lessened demand

for New South Wales timber in the colony of Victoria and partly to the protracted drought, and to the suspension of public works, the timber for which being usually drawn from the government reserves. The forest revenue consists principally in the receipts from the reserves subject to royalty, licenses, for cutting and ring-barking timber, &c.

The following table shows the revenue and expenditure of the forest department for the years 1884 and 1885:

	Amount.	Equivalent in United States currency.		Amount.	Equivalent in United States currency.
Revenue, 1884:	£ s. d.		Revenue, 1885—Cont'd.	£ s. d.	
Revenue from reserves, subject to royalty	8,392 13 10	$40,843 03	Ring-barking fees.	39 2 6	$190 39
Ring-barking fees.	650 5 0	3,164 42	Revenue from all other timber and quarry licenses..	8,695 10 0	42,316 64
Revenue from timber and quarry licenses	8,679 5 0	42,237 57	Seizures	539 17 6	2,627 29
Seizures	528 1 10	2,569 96	Total	13,863 2 8	67,464 90
Total	18,250 5 8	88,814 96	Expenditure, 1885:		
Expenditure, 1884:			Salaries	9,390 0 0	45,745 09
Salaries	9,521 13 11	46,337 34	Traveling and contingent expenses, including salaries of temporary employés	7,643 4 9	37,195 81
Traveling and contingent expenses	7,157 4 1	34,830 58	Indian and Colonial Exhibition.	171 6 0	833 62
Wattle planting	254 4 0	1,237 06	Wattle planting.	69 12 0	338 70
Catalpa	353 17 2	1,722 05	Catalpa	371 16 2	1,806 97
Cedar	193 15 8	942 93	Cedar	389 17 1	1,897 20
Total	17,480 14 5	85,069 91	Forest flora	110 1 6	535 67
Revenue, 1885:			Total	18,145 17 6	88,353 06
Revenue from reserves, subject to royalty	4,588 12 8	22,330 58			

FOREST PLANTING—METHODS, BOUNTIES, SCHOOLS, ETC.

The forest branch of the department of mines, as mentioned in a former part of this report, has charge of all the government operations in the way of forest planting

The forest rangers have very extensive districts assigned to them, and their duties, on that account, are very difficult to perform.

An acting ranger has been appointed at Lord Howe's Island, a small island belonging to New South Wales, situated about 900 miles from Sydney. There are also several rangers and assistants at Silverton, in the far west. Most of the forest officers are men of large and varied experience and evince a thorough knowledge of the work they have in hand, whilst some of them possess no little scientific knowledge, although previous to appointment they are not required to have undergone a course of training like that required of those in charge of the large forest estates in Europe and India.

The work of replanting forest trees has not been practiced to any great extent in New South Wales. Indeed, to show how little has been done in that way, I will mention that in the year 1885, out of an expenditure of £18,145 17*s.* 6*d.* ($88,353.06) by the forest department, only £831 5*s.* 3*d.* ($4,045.34) was incurred on account of planting.

The experience of the department in tree planting has thus far been confined to the narrow strips of country along the railway lines. The trees chosen for the purpose are usually the wattle (acacia), with

a sprinkling of pine and cedar, but such as have been planted are scattered at irregular distances along the route. The expenses incurred in planting them in this extended fashion, together with their liability to injury and the difficulty of watering them, compelled the department to discontinue the planting, except in particularly favorable localities. In addition to the operations of the forest department, the director of the Botanical Gardens, of Sydney, has a tree nursery under his charge at Campbelltown, 34 miles from the metropolis. This nursery is used principally for the growth of trees and shrubs to adorn the government reserves, parks, gardens, and grounds, &c., attached to the public buildings. Great care is taken in this nursery to propagate some of the most useful and ornamental indigenous trees of the colony, such as the myall, boree, black wattle, green wattle, the waratah, together with various palms, cedars, figs, &c.

Amongst the indigenous trees to which attention is paid, I must not forget to mention the "waratah," or Christmas tree, so called on account of its being so generally used for decorating purposes during the Christmas holidays. The waratah, properly speaking, is more of a bush than a tree, but it sometimes attains the height of 40 feet and a diameter of 15 inches. In the month of November it is covered with a mass of beautiful white flowers, but towards Christmas the calyces, which are very persistent, change to a bright red color, or to red mixed with white, which gives the plant quite a different appearance.

Much attention is also given to the cultivation of various kinds of fig trees, some of which are of gigantic size. They frequent the eastern slope, and are supported by great buttresses, which stand out from the tree in thin walls, sometimes 20 feet high. One of the finest specimens was named by Baron Muller *Ficus columnaris*, and it is said to attain greater perfection in Lord Howe's Island than elsewhere. It originates in the fork of some tall tree, which it destroys by sending forth strong limbs, from which rope-like roots descend until they reach the ground, when they enlarge into stems and become the centers from which other stems stretch forth.

The roots of this tree increase so rapidly and at the same time send out such gigantic branches that it is no uncommon thing to see the original tree at a height of 70 or 80 feet peeping through the fig, as if itself were the parasite on the real intruder. Within the angles or walls of the tree there is said to be room enough for a good-sized family to dine comfortably. The rich undergrowth of palms and ferns which find shelter beneath its fantastical branches add greatly to its weird and varied attractions.

The forest department does everything in its power to assist the public in regard to tree planting, and when practicable, without interfering with private enterprise, seeds and plants are furnished free of charge, together with much useful information and instructions as to planting the same. As there is no department of agriculture in the colony the forest branch has to deal with noxious weeds and many other matters which concern more properly an agricultural bureau.

There are no schools of forestry in New South Wales, nor has the government made any appropriation or provision of any kind for the systematic study of the science of forestry. A bill, however, has been introduced into parliament for the establishment of model farms

throughout the colony where the science of forestry will be taught among other branches of practical and scientific farming.

DESTRUCTION OF FORESTS—CAUSES AND RESULTS.

The forests of New South Wales and of other portions of Australia are destroyed in various ways, but principally by ring-barking. This process consists in simply cutting a ring about 6 to 10 inches wide round the tree with an ax or tomahawk. The time chosen for this process is in the autumn, when the sap has matured and is ready for repose. The destruction of forests in this way has become so great as to seriously attract the attention of the government. It appears to have begun about thirty years ago in the water-shed of the Hunter River, but it did not become very general until the inauguration of the system of what is called free selection, by which certain tracts of land were opened up to *bona fide* settlers (or to persons who had erected homesteads) at low prices. The free selectors usually chose heavily timbered districts, and in a short time the wholesale destruction of forests began. Ring-barking was thought to be the best means for clearing land, not only for small farms but for grazing purposes. According to an interesting and valuable paper on this subject, prepared by Mr. W. E. Abbott, for the Royal Geographical Society of New South Wales, the objections urged against this method were that the creeks and rivers would dry up owing to the increased evaporation, and that the rainfall would be reduced by the removal of the large condensing surface offered by the winds when heavily laden with moisture.

Mr. Abbott has given some practical illustrations resulting from his experience. In 1869 and 1870 he ring-barked the greater part of the water-shed of two creeks, and the whole of the water-shed of a third, being about two miles, and draining a well defined valley shut in by high ridges of basalt. He noticed, as soon as the timber was dead, that one of the creeks assumed the character of a permanent stream, and that the others were very greatly improved. In 1878 all three became permanent streams, and have continued such ever since. Previous to the ring-barking they were dried up during a portion of the year. Until these experiments were made it was regarded as the height of absurdity for any one to destroy timber for the purpose of producing water on his land. Now it is done every day. Mr. Abbott does not think that the destruction of forests will reduce rainfall, but he argues that when there is a large and regular rainfall there is sure to be a heavy forest growth, and that the forest is the result of the rainfall, and not the rainfall of the forest. Mr. Abbott attributed the increased flow of water on his land, first, to the fact that the roots of the trees decaying acted as a sort of subsoil drainage, leading the water down into the subsoil and afterwards allowing it to drain off slowly into the water courses, proving it to be of a temporary benefit only; second, that a large proportion of the rainfall which was formerly taken up by the roots of the growing trees and evaporated from the leaves was enabled to find its way to the creeks and rivers. Mr. Abbott says:

> The fact that the Eucalyptus, so common throughout Australia, is perhaps the most vigorous growing tree known, and that it is used successfully in other parts of the world to dry up swampy land, would seem to support this explanation.

Australian forests are also destroyed by bush fires and natural causes, such as drought, floods, storms, ravages of opossums, insects,

fungi, &c. If the drought lasts long enough, there can be no doubt about its destructive agency, but there are often more effective agents for the destruction of forests than the drought, for during the driest seasons ever known in the colonies many trees were not affected at all. The injury done to the forests by bush fires is also very much exaggerated. These fires are of course more common during dry seasons than at other times. In the great conflagrations that took place in 1863 and 1865 it seemed that vast tracts of forest country had been fatally injured. The leaves assumed a sickly color, but the trees, except in a few instances, after two or three years showed marked signs of recovery from the scorching they had received. The foliage was much improved, and large numbers of shoots sprang up from their trunks.

The greatest bush fires ever known in Australia occurred on Thursday, the 6th of February, 1851, called Black Thursday. On that day the thermometer rose in Victoria to 118 degrees in the shade. The northern winds were charged with a fearful heat. Vast forests were in flames. There had been no rain for a considerable period, and fires seemed to break out everywhere. Stations, farm-houses, sheep, cattle, and even human beings were destroyed. The wind was so hot that it seemed to bear death upon its wings. A gentleman who reached Melbourne at that time stated that a chain of fire ran on both sides of him even to the margin of the road for a distance of over 50 miles. Like the floods of 1849 the disaster was looked upon as a visitation of Providence.

About ten years ago vast tracts of forest country were apparently destroyed by fire in New South Wales. The fire seemed to extend in a series of columns all the way from Sydney to Parramatta, a distance of 15 miles. After a period of seven years scarcely a trace of the conflagration was left.

In what are known as bush forests, where the trees are characterized by an extraordinary luxuriance and denseness of growth, fires seldom occur. The bush forests are usually found on the east side of the great dividing range or mountain slopes or terraces, where the soil consists of decomposed rocks, or on rich alluvial lands along the courses of rivers. The atmosphere in these forests even during the heat of summer is charged with moisture. Among the trees common to these forests may be mentioned the cedar, rosewood, pine, tulip-wood, silky oak, white maple, yellow-wood, native laurel, colonial deal, brush cherry, the myrtle, hickory, native tamarind, and others.

Bush fires occur more frequently among what are called open forests. These forests are composed principally of trees belonging to the Eucalypti, which I have described in a former part of this report.

The forests of Australia are occasionally injured by vast swarms of caterpillars. These insects grow in New South Wales to an extraordinary size and move in perfect columns, making parallel roads as they eat their way round the barrels of the trees, destroying both the bark and sap wood.

The chief natural cause, however, of the destruction of forests in Australia is said to be the ravages of the opossum. According to a paper read before the Royal Geographical Society of New South Wales in August, 1885, by Mr. Peter Macpherson, the opossums appear in sufficient numbers to lay waste vast tracts of timbered country. Mr. Macpherson had been a very close observer of the forests for many years. He gave much study and time to the habits

of the opossum. He noticed that vast numbers of these animals flock to the gum trees growing near the water-holes, especially in time of drought. In order to test fully their destructive powers, he captured a few opossums and put them on the trees in his garden. He noticed that a single opossum would eat more than two hundred leaves in one night.

The animals showed great fondness for the young sappy leaves of the gum tree, and when very hungry were not averse to cherry leaves, light wood, and honeysuckle. It was noticed that they would not touch the tough, leathery leaves of the old gum trees when young ones were in reach. It was urged against the theory of the destructive powers of the opossum that on account of their heavy weight it was quite impossible for them to climb up the slender branches of trees to eat the leaves, but Mr. Macpherson noticed that the large opossums would eat the bark and leaves within reaching distance and that the young ones would go out on the branches, and, using their fore feet as hands, would bend the branches down towards them and nibble off the leaves before letting them go.

Mr. Macpherson noticed that the trees destroyed by the opossum assumed a spectral or ghost-like appearance, whilst those destroyed by caterpillars and other insects were nothing like so barren, the leaves in the latter case being eaten off in a very irregular and uneven manner. The insects would bite the leaf at the edges and again in the middle, and sometimes in both ways.

Mr. Russell, the government astronomer, in commending Mr. Macpherson's paper, said it should be remembered that large patches of forests die off, while all around them there was the usual healthy vegetation. Professor Liversedge, of the Sydney University, is of opinion that the decay of the gum trees in many cases is due to the exhaustion of the soil, although the same soil might support a flourishing growth of other forest trees, and that to obtain the best growth of trees it is necessary to have a rotation of crops, as in farming.

RECLAMATION OF SAND DUNES OR WASTE PLACES BY TREE PLANTING.

The question of reclamation of sand dunes or waste places by tree planting has never been a pressing one in New South Wales, on account of the sparsely settled condition of the country. With the exception of the work on the government reserves and along the railways, as mentioned in another part of this report, very little has been done in the way of reclaiming waste places, unless, indeed, I mention the reclamation of the sand drifts in the harbor at Newcastle. The plan adopted at Newcastle consists in the erection of brush or close paling fences running parallel with each other, about one or two chains apart, from the base to the top of the sand drift, to shelter the trees and prevent the shifting of the sand by the wind.

Mr. J. H. Maiden, F. R. G. S., the curator of the Technological Museum at Sydney, to whom I am indebted for much of the material of this report, strongly recommends the following indigenous trees for planting in sand dunes or waste places:

Acacia amata (sometimes called the "Kangaroo Island acacia"), a small, bushy tree with angular branches; leaves reduced to phyllodia; found in the Blue Mountains and in the New England districts. The timber is light and tough, but seldom used. The trees make very good hedges.

Funella verrucosa.—This tree is valuable not only for its properties for binding coast and desert sands, but for its strong, durable, and easily-wrought timber.

Casuarina.—Most of the species of this genus will grow in exceedingly sandy soil—for instance, the oak, swamp oak, forest oak, dwarf oak, river oak. The latter is sometimes called forest oak; scientific name, *Casuarina forulosa.* It frequents open forests from Illawara to Richmond River, and westward to Bathhurst and New England. The timber is very beautiful, remarkably heavy and strong; used for cabinet-work, shingles, &c.

The government plantations of catalpa have been successful in various parts of the colony, especially at Coolamundra and East Maitland.

The following is a list of trees planted at the latter places since 1882:

AT EAST MAITLAND.

221 *Catalpa speciosa.*
221 *Juglans nigra* (black walnut).

AT COOLAMUNDRA.

613 *Catalpa spsecisa.*
121 *Juglans nigra* (black walnut).
61 *Syncarpia laurifolia* (turpenti
94 *Eucalyptus* (various species).
29 *Grevillea robusta* (silky oak).
225 *Sterculia diversifolia* (kurrajong).
3 *Melaleuca leucodendron* (tea tree).
25 *Tristania conferta* (brush box).
83 *Pinus insignis* (Californian pine).
5 *Eugenia Ventenaltii* (water-gum).
18 *Quercus ilex* (evergreen oak).
51 *Fraxinus Americana* (American ash tree).
37 *Quercus virens* (evergreen oak).
35 *Laurus camphora* (camphor tree).
24 *Araucaria Cunninghamii* (pine tree).
8 *Olea Europœa* (olive tree).

The inspector of forests recommends the following trees and shrubs for planting on swampy land or land subject to inundations:

Blue-gum (*Eucalyptus globulus*).
Red-gum (*Eucalyptus rostrata*).
Flooded-gum (*Eucalyptus saligna*).
Swamp oak (*Casuarina suberosa*).
Belah (*Casuarina Cunninghamiana*).
Moreton Bay chestnut (*Castanospermum Australe*).
Brush box (*Tristania conferta*).
Swamp mahogany (*Eucalyptus robusta*).
Blue-gum (*Eucalyptus botryoides*).
Blackwood (*Acacia melanoxylon*).
Turpentine tree (*Syncarpia laurifolia*).
Alder (*Alnus glutinosa*).
Bamboo (*Bambusa arundinacea*).
Weeping willow (*Salix babylonica*).
Golden osier (*Salix aurea*).
Huntington willow (*Salix Russelliana*).
Pampas grass (*Gynerium argenteum*).
Supple-jack (*Flagellaria indica*).
New Zealand flax (*Phormium tenax*).
Cabbage-tree palm (*Corypha Australis*).
Bangalo palm (*Seaforthia elegans*).
Red cedar (*Cedrela Australis*).
Plane tree (*Platanus orientalis*).
Plane tree (*Platanus occidentalis*).
Tea tree (*Melaleuca leucodendron*).
Tea tree (*Melaleuca styphelioides*).
Tea tree (*Callistemon salignus*).
Messmate (*Eucalyptus amygdaliua*).

The following list of plants, recommended for reclaiming sand dunes, is taken from the advance sheets of Mr. Maiden's new work entitled "The Useful Plants of Australia":

Agrostis.
Carex.
Cynadon.
Ehrartu.
Elymus.
Festuca.
Imperat.
Lepidosperma,
Mesembryanthemum.
Panicum.
Pod.
Ragodia.
Spinifex.
Stipa.

SOURCES OF LUMBER SUPPLY—TRADE IN LUMBER, ETC.

The difficulties in obtaining colonial pine and other easily-wrought home-grown timbers, together with the high cost of same, have induced the people to look abroad for no inconsiderable portion of the lumber supply.

Indeed, for several years past the colony has been obliged to import nearly one-half of the quantity of lumber consumed. The

quantity of timber returned by the forest rangers during the year 1886 was 62,786,456 superficial feet against 62,669,310 superficial feet for the year 1885. Of the quantity produced in 1886 about two-thirds are classed as hardwoods and cedar.

The following table shows in detail the quantity of the various kinds of timber returned for 1885:

Sawed timber, hardwood, and cedar	superficial feet..	57,418,631
Hardwood piles, girders, and logs	do....	3,219,679
Cedar, in log	do....	1,731,000
Paving blocks	do....	300,000
Total		62,669,310
Piles	running feet..	2,350
Do	number..	2,260
Sleepers	do....	31,407
Posts and rails	do....	185,600
Palings	do....	528,402
Spokes	do....	86,283
Felloes	do....	60,000
Dray-shafts	do....	546
Laths	do....	2,315,900

The total quantity of timber imported into the colony of New South Wales, exclusive of piles, sleepers, and shingles, &c., for the year ending December 31, 1886, was 64,604,793 superficial feet against 65,644,842 superficial feet for 1885. Of the imports for 1886 there were 23,561,175 superficial feet of dressed timber and 41,043,618 superficial feet of undressed timber, showing an increase in the dressed timber of 4,096,330 superficial feet and a decrease in the undressed timber of 5,147,161 superficial feet.

Quantity and value of timber imported into New South Wales for the years 1885 *and* 1886, *and countries whence imported.*

DRESSED.

Countries.	1885.		1886.	
	Quantity.	Value.	Quantity.	Value.
	Sup. feet.		*Sup. feet.*	
Great Britain	3,522,771	$159,840	6,404,526	$314,760
Victoria	689,058	49,210	869,540	53,470
South Australia	313,404	25,245	346,498	30,980
New Zealand	5,304,866	218,245	5,376,615	198,945
British Columbia	767,319	30,165	118,577	4,000
United States	3,496,799	178,325	4,479,598	187,350
Norway	5,423,341	218,600	5,762,179	207,675
France	3,550	2,250	5,288	2,975
Germany	300	15	171,072	6,500
Queensland	3,437	170	204	50
New Caledonia	.....	.....	32,083	1,210
Total	19,464,845	882,065	23,561,175	1,007,765

Quantity and value of timber imported into New South Wales, &c.—Continued.

UNDRESSED.

	1885.		1886.	
	Quantity.	Value.	Quantity.	Value.
Great Britain	1,732,186	$61,580	1,519,040	$58,225
Victoria	1,613,681	61,800	772,366	26,995
South Australia	473,484	38,810	662,426	54,570
Queensland	819,656	31,355	122,297	4,350
Tasmania	325,731	10,740	64,639	2,215
New Zealand	10,537,974	267,880	8,465,653	220,385
Western Australia	900	50	30,000	25
Fiji	27,839	1,360	.....	.....
Point de Galle	4,000	500	.....	.....
Hong-Kong	525	95	5,338	355
British Columbia	9,485,774	272,675	1,808,416	40,000
United States	19,728,436	581,140	25,761,156	686,395
Norway	785,595	27,975	1,089,042	31,020
Sweden	477,314	23,850	513,004	21,000
Kaiser Wilhelm Island	86,907	5,750	.....	.....
Germany	80,777	3,035	53,693	2,275
Belgium	.....	.....	1,300	25
New Caledonia	.....	.....	127,545	3,200
New Guinea	.....	.....	4,000	250
Borneo	.....	.....	98,700	8,350
Total	46,180,779	1,409,695	41,043,618	1,164,535

It will be seen from this table that the United States furnishes nearly one-half of the total timber imports, and that New Zealand comes next. The imports, however, from New Zealand declined from 15,842,840 superficial feet in 1885 to 13,842,268 superficial feet in 1886. There was a still greater falling off in the imports from British Columbia during the same period. In 1885 New South Wales imported from British Columbia 9,485,774 superficial feet of undressed and 767,319 superficial feet of dressed timber, but in 1886 she only imported 1,808,416 superficial feet of the former and 113,577 feet of the latter, this showing a falling off in the total timber imports from British Columbia during the year of 8,331,100 superficial feet. The imports, however, from the United States have increased steadily from year to year.

IMPORTS OF LUMBER FROM THE UNITED STATES.

The popularity of American lumber in New South Wales is very forcibly illustrated by the extraordinary increase in the quantity and value of the imports. In 1881 the imports of dressed and undressed lumber from the United States amounted to only 2,000,197 superficial feet, valued at $110,260. In 1886 they were 30,240,754 superficial feet, valued at £174,767 ($673,785.)

The subjoined table shows the quantity and value of the imports of dressed and undressed lumber into the colony of New South Wales from the United States for each year from 1881 to 1886, inclusive.

Year.	Dressed lumber.			Undressed lumber.		
	Quantity.	Value.	Equivalent in United States currency.	Quantity.	Value.	Equivalent in United States currency.
1881	670,680	£12,888	$64,440	1,129,517	£9,164	$45,820
1882	2,886,261	38,720	193,600	6,249,246	56,867	284,335
1883	2,859,410	34,843	172,215	8,156,932	60,243	301,215
1884	3,121,896	33,717	168,585	10,653,850	76,248	381,240
1885	3,436,790	35,665	178,325	19,728,436	116,228	581,140
1886	4,479,598	27,470	187,350	25,761,156	137,297	686,435
Total	17,654,635	193,303	964,515	71,679,137	456,047	2,280,185

EXPORTS OF TIMBER.

The annual export of timber produced in the colony, although small, has materially increased since 1881. In that year it was only 4,125,896, but in 1886 it was 13,369,777.

Victoria received 10,553,955 feet of undressed and 92,584 of dressed, and the remainder was distributed amongst Queensland, Tasmania, and other colonies.

The following table shows the quantity of dressed and undressed lumber, principally of foreign produce, exported from New South Wales for each year from 1881 to 1886, inclusive.

Year.	Quantity.	Year.	Quantity.
	Superficial ft.		*Superficial ft.*
1881	4,125,896	1885	9,981,922
1882	5,711,868	1886	13,369,777
1883	8,611,128		
1884	14,289,211	Total	56,089,497

CUSTOMS DUTIES.

There are no bounties of any kind upon the importation of lumber into the colony of New South Wales, but on the contrary the trade is severely handicapped with exorbitant customs duties. The duties have always been large, but last year they were heavily increased. The tax upon dressed lumber was increased from 2*s.* (48 cents) to 3*s.* (72 cents) per 100 superficial feet, and upon undressed from 1*s.* (24 cents) to 1*s.* 6*d.* (36 cents) for 100 superficial feet. Laths, which heretofore were admitted free, now pay 9*d.* (18 cents) per 1,000, and dressed laths the same as dressed lumber. Palings are taxed at 1*s.* (24 cents) per 1,000. Shingles at 1*s.* (24 cents) per 1,000. These duties have awakened no little opposition and are regarded as presenting an anomaly amongst a people professing to be wedded to the principles of free trade. The colony of Victoria, which for years past has been a stanch advocate for protection, admits all undressed lumber free, and the duty on dressed is 1*s.* 6*d.* (36 cents) per 100 superficial feet, one-half less than that of New South Wales. Shingles are taxed in Victoria at 6*d.* (12 cents) per 1,000, against 1*s.* (24) cents in New South Wales. The New South Wales timber duties have been in operation about a year, and were intended to lessen the imports of the easily-wrought American lumber and promote the use of Australian hard wood, but the contrary seems to have been the result, for the home-grown woods are no more popular than before, while the imports of American timber have largely increased.

DEALERS IN PLANTS, SEEDS, ETC.

The various establishments of nurserymen and seedmen of Sydney will compare very favorably with those of the chief metropolitan cities of Europe and America. Vast sums of money have been expended upon improving their grounds and in adding to the number and variety of their trees and plants from all parts of the world.

The following are some of the leading nurserymen and seedmen of Sydney and suburbs:

Messrs. Shepherd & Co., Darling Nursery, Surry Hills.

Anderson & Co., 216 and 218 Pitt street, Sydney.

Graham & Co., Lilydale Nursery, Livingston street, Marrickville.
Ferguson & Co., Australian Nursery, Double Bay, Sydney.
Somerset Nursery, George street, Parramatta.
Searl & Son, Blair Athol avenue, Petersham, Sydney.

FOREST LAWS.

The only forest laws of this colony are included in the Crown lands act of 1884, now in force, a copy of which I forward with this report to the Department of State, Washington, D. C., under separate cover, marked "A." But as the act is a very complicated and voluminous one, occupying, with the forms and regulations thereunder, nearly two hundred closely printed pages, and as the sections referring to the forests are scattered among much irrelevant matter in various parts of the volume, I have thought best to separate them altogether from other parts of the act, and append them consecutively at the close of this report.

It will be seen from the act that sections 87 and 88 provide for granting leases to scrub lands at nominal rents, under conditions to which I have referred enforcing the clearing and destruction of the scrub. Sections 93 and 95 relate to permits for ringbarking timber. Section 98 defines the rights of holders of grazing leases or licenses in regard to cutting timber. Sections 112 and 116 deal with the state forests, timber reserves, licenses, and permits. Section 133 imposes penalties for violation of the regulations for cutting timber. It will be seen by this section that all persons, unless legally authorized, when found in possession of lands, whether upon Crown lands, reservations, or dedications, will be liable to a fine of £5 ($24.33) for the first offense, £10 ($48.66) for the second, and £20 ($97.33) for the third or subsequent offense, and that holders of Crown lands under lease or license shall not obstruct any government surveyor or authorized officer from entering at any time on any part or portion of their holdings.

TIMBER REGULATIONS.

The timber regulations are printed entire in the Crown lands act. These comprise a carefully compiled code of rules for regulating the state forests and timber cutting, ringbarking, &c. It will be seen from these regulations that there are in New South Wales two classes of government reserves for the preservation of timber—one comprising the state forests and the other the timber reserves. The second class is again divided into three sections, A, B, C.

But although these reserves are systematically arranged, the minister of mines, should it be deemed expedient, has the same power at any time to alter the classification, as he also has to close a whole or part of a reserve, if he considers it prudent and beneficial to any part of the country.

With respect to licenses, it must be mentioned that they are available only for one particular reserve or a subdivision of any reserve, and, as before stated, these certificates may be canceled at the discretion of the minister of mines, or transferred on indorsement of the ranger in charge to another reserve of the same class. Licenses are not transferable, except in special cases upon approval of the minister.

Restrictions are also laid upon licenses as to the minimum girth of

trees at a height of five feet from the ground. The prescribed girth for hard woods is as follows:

Description of timber.	Girth.
	Ft. In.
Black-butt and yellow wood timber	7 6
Red-gum, gray-gum, woolly-butt brush, or white box, and turpentine timber	6 6
Blue-gum, spotted gum, messmate bloodwood, mountain ash, mahogany (forest), and iron-bark (red, gray, and broad leaved)	6 0
Peppermint, or redwood, and swamp mahogany	5 6
Stringy bark	5 0
Blackwood, and yellow, and white box	4 0

For soft woods, the minimum girth prescribed is:

Description of timber.	Girth.
	Ft. In.
Red cedar	9 0
Hoop or Moreton Bay pine	7 0
White beech	7 0
Lilybark and rosewood	6 0
Black, red, or white pine, and swamp oak	3 0
Forest oak	2 8

With the exception of the wattle and ring-barked trees, no stripping of bark from standing trees is allowed, and the tops are ordered to be cut off trees within seven days after felling. The kurrajong, quandong, and such other trees as may be specified from time to time, are exempted altogether from operations, excepting in time of drought, when the leaves of the kurrajong may be used as food for stock.

Among other provisions applying to permits and licenses may be noticed the regulations: (1) Demanding particulars of quantity, description, and brands of the timber claimed to be sent to the forest ranger of the district within twenty-one days after January 1, April 1, July 1, and October 1; (2) prohibiting the felling of trees within a chain and a half of any navigable river, unless a particular tree is marked for such a purpose by some one in authority, and (3) respecting the amount of timber any person is allowed to hold, the stated quantity being 50,000 superficial feet. A separate certificate must be obtained for every portion in excess, although the minister has power in cases of large contractors to increase the maximum number of feet. Lastly, lands or timber reserves or state forests that are not leased may be granted as sites for saw-mills to the extent of ten acres to holders of timber licenses, or permits and areas of 160 acres for the agistment of stock used for drawing timber by licenses.

For your further information upon the forests of Australia I will refer you to my special report entitled "The Timber Trade of New South Wales," published in the Consular Reports, No. 65, for January, 1886.

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, New South Wales, February 18, 1887.

[Extracts from the Crown lands act of New South Wales, referring to forests and timber regulations.]

87. Scrub lands may be leased in areas not exceeding 10,240 acres nor less than 640 acres, and for a term not exceeding fifteen years, to any person, subject to such conditions as to clearing and destruction of scrub as may be defined by regulations, at an annual rental of not less than 2*s.* 6*d.* per section of 640 acres for the first five years, 5*s.* for the next five years, and £1 for the last five years: *Provided*, That it shall be lawful for the minister, on the recommendation of the local land board, to forego the rent for any period not exceeding five years. Every lessee of any portion of scrub lands shall, within the time and according to the manner prescribed, pay the rent as determined by the minister, after appraisement by the local land board, into the treasury, and shall, at the time and in the manner prescribed, satisfy the local land board that he has commenced and is continuing to fulfill the conditions of his lease as to the clearing and destruction of scrub on the leased land; and if any lessee shall fail to pay his rent or to satisfy the said board as aforesaid, the minister, on the recommendation of the said board, may declare his lease to be forfeited.

88. It shall be lawful for any pastoral or homestead lessee whose leased land contains scrub or other noxious undergrowth to apply in the prescribed manner to the minister for the conversion of the portion of land under lease containing such scrub or undergrowth into a lease of scrub lands under the last preceding section for any term not exceeding fifteen years; and if the local land board shall recommend such conversion the governor may resume from the lease such portion of land as the said board shall consider desirable, and may grant a lease thereof to the applicant under the said section: *Provided*, That the lessee shall be entitled to a proportionate abatement or refund of any rent paid by him under his pastoral or homestead lease for the unexpired portion of any year for which he has paid rent in advance: *Provided further*, That any applicant for a scrub lease under this or the next preceding section shall pay for the survey thereof: *Provided, however*, That no pastoral or homestead lessee shall be granted a lease of such scrub land other than within the land held under lease by himself.

Leases may be granted for special purposes.

90. The governor may lease by auction or otherwise, for a term not exceeding fifteen years and in areas not exceeding in any case 320 acres, Crown lands for any of the purposes hereinafter specified, that is to say, for dams, tanks, irrigation works, wharves, bridges, punt-houses, ferries, bathing places, landing places, sawmills, brick-kilns, lime-kilns, slaughter-houses, tanneries, wool-washing establishments, quarries, fisheries, building or repairing ships or boats, tramway purposes, obtaining guano, shells, limestone, loam, brick-earth, gravel, or ballast, or for an inn, store, smithy, bakery, or mail station in sparsely populated districts, or for any purpose declared by the governor by proclamation in the Gazette to be a purpose within this section, and may determine the upset rent thereof, if let at auction, or the annual rent, if let otherwise, not being in either case less than £10 per annum; and may annex to any such lease such conditions, reservations, and provisions as he may deem fit: *Provided*, That leases may be granted at a less rental to contractors of public works for purposes connected with the construction of such works during the term of contract. If it should appear to the satisfaction of the governor that the land comprised in any such lease is not used and occupied *bona fide* for the purpose for which the same has been made, or that default has been made in any condition, he may declare such lease forfeited, together with any improvements erected on the land and any rent paid in respect thereof.

91. The governor shall, notwithstanding the provisions of the "mining act of 1874," impose a royalty of not less than 6*d.* per ton on coal raised from land which may be hereafter leased. And such royalty shall be in addition to or in substitution of any rent payable by such lessee under the said act, but shall not affect or prejudice any other condition of the lease. And for the purpose of giving effect to the provisions of this section the governor may make regulations prescribing the time and manner of payment of such royalty and the manner of enforcing such payment.

92. Subject to such conditions as may be prescribed, the governor may make leases of Crown lands not exceeding 3 chains in width but without limit of length, for irrigation works, or for forming and maintaining tramways and crossings, and other necessary approaches and works in connection therewith. And notice of every application for a lease under this section, and of the purpose for which it is proposed to be made, shall be published in the Gazette for at least four consecutive weeks before the issue of such lease.

Ringbarking by Lessees.

93. Every lessee of Crown lands desiring to ringbark trees upon his leasehold land shall obtain a permission to do so from the local land board, and in his application, in the prescribed form addressed to the land agent, shall describe the boundaries and area of the land upon which he proposes to ringbark; and in regard to any land not comprised within a timber or forest reserve, the board may, in their discretion, refuse or grant permission for the same after such inquiry and upon such conditions as to them may seem necessary. And any lessee who shall, without such permission, ringbark trees on a leasehold, or shall cause or knowingly permit or suffer the same to be done, shall, on conviction before any two justices of the peace at the court of petty sessions nearest to such leasehold, be liable for the first offense to a penalty of not less than 1 shilling nor more than 10 shillings for each tree so ringbarked, and for a second or subsequent offense be liable to a like penalty, and to the forfeiture of his lease.

94. Whosoever shall ringbark trees, or strip bark from trees on Crown lands, without holding such permission, or in violation of any condition thereof, or without a written authority under the hand of the lessee of such Crown lands, shall, on conviction as aforesaid, be liable to a penalty for each tree ringbarked or stripped of not less than 1 shilling nor more than 10 shillings.

95. Every information for an offense under any of the two preceding sections shall be laid by some officer of police or person specially authorized by the minister. And if, at the hearing of such information, any question shall arise whether any person holds a valid permission to ringbark, the burden of proof thereof shall be on the person who claims to hold such permission.

General provisions affecting leases, lessees, and licenses.

96. Every lease shall be liable to forfeiture if any rent be not paid within the prescribed period or upon breach of any condition annexed to such lease; but forfeiture for non-payment of rent may be prevented by payment thereof with an additional sum equal to five per cent. of the amount of rent due within three months of the due date thereof, or of ten per cent. of such amount within six months of such date; but no forfeiture shall operate to extinguish any debt to the Crown in respect of such rent.

97. Any sums paid as rent for runs, under the provisions of the acts hereby repealed, upon unexpired portions of existing leases, shall be credited towards payment of rent or license fee under the provisions of this act, and such sums shall be available for the purposes of refunds under the provisions hereinbefore contained.

98. The following provisions shall govern all leases and licenses granted under this act and the holders of such leases or licenses, namely:

(I) No lease or license other than special leases shall confer any right to remove material from the leased land, or to sublet such land for other than grazing purposes, or to prevent the entry and removal of material by authorized persons.

(II) Lessees and licensees may take from land under lease or license to them not comprised within a timber or forest reserve such timber and other material for building and other purposes upon the land under lease or license as may be required by them as tenants or licensees respectively.

(III) No lessee or licensee shall prevent other persons duly authorized in that behalf either from cutting or removing timber or material for building or other purposes, or from searching for any mineral within the land under lease or license: *Provided*, That nothing in this subsection shall apply to a conditional lease as regards the taking or removal of timber or other material for building purposes.

99. The following classes of lands shall be exempt from pastoral lease and homestead lease:

(*a*) Town and suburban lands and lands reserved or set apart by notice in the Gazette for towns or villages or suburban settlements.

(*b*) Lands under lease or lawful occupation for mining purposes.

(*c*) Lands dedicated to any public purpose.

(*d*) Lands temporarily reserved from sale for commonage.

(*e*) Lands reserved from lease under any of the hereby-repealed acts until the reservation thereof shall have been revoked under the provisions of this act.

100. If any holder of a pastoral or homestead lease whose rent, in accordance with the provisions hereinbefore contained, has been fixed at the prescribed minimum rate, shall consider that by reason of the inferior grazing capabilities of the l nd embraced in the lease such rent is an excessive rental for such land, such lessee may, in the prescribed manner, apply to the local land board for a reduction of such minimum rate. And if, upon due inquiry, such board shall be of opinion that the said rate is excessive it may recommend the minister to reduce the same; or, if not of such opinion,

may recommend that the said rate be retained. On receipt of any such recommendation, together with any further report from the said board which the minister may require, he shall determine the matter of the application and fix the fair annual rental of the land for all purposes of this act, which shall, upon notification in the Gazette, be the rental payable under this act in respect of such land. But no such reduction shall operate for a longer period than the unexpired portion of the five-year term then current, as hereinbefore provided: *Provided, also*, That no such lessee shall be entitled to make any such application for reduction of such minimum rate unless he shall have duly paid the rent fixed for the current year, pursuant to the provisions hereinbefore contained; but such lessee shall be entitled to a refund of the amount paid by him in excess of any reduced amount so notified as aforesaid: *Provided, lastly*, that notwithstanding any such such reduction so made, the minister may, on the expiration of the said five-year term for which such reduction shall have been made, direct that the rental shall for the residue of the term of the lease, or for the next period of five years of such lease, be restored to the prescribed minimum rate. or be subject to appraisement by the local land board, and in either case such direction shall be notified to the lessee in the prescribed manner. A return of all rents, if any, reduced under this section shall be laid before Parliament within fourteen days after the commencement of each session. The several provisions of this section shall equally apply to all occupation licenses and their holders and to the license fees paid or made payable in respect thereof.

State forests—timber reserves—licenses—permits.

112. It shall be lawful for the governor by notification in the Gazette to proclaim any areas of Crown lands therein described to be state forests and in like manner to reserve from sale any such areas as timber reserves for the purpose in each case of preserving under regulations in that behalf to be made by the governor the growth and succession of timber trees and of preventing as far as practicable the destruction and exhaustion of such state forests.

113. State forests may be subdivided into such blocks as the minister may think fit. For the purpose of carrying out such subdivision all existing forests and timber reserves may be reserved from sale, lease or otherwise as the minister may think proper until so subdivided.

114. Any state forest or any portion thereof may by notification in the Gazette be dedicated or reserved for a specific period by the governor for the conservation of timber, and upon publication of such notification such forest or portion thereof shall not during the term of reservation be open to timber or other licenses or permits under the provisions of this act.

115. It shall be lawful for the governor to frame regulations for the issue of licenses or rights to cut and remove timber on state forests and also for the issue of permits to cut and remove timber from timber reserves and also for the issue of wood-cutters' licenses and of licenses and permits to dig for and remove from state forests, timber reserves, or Crown lands, whether under lease or not, any gravel, stone, clay, shells, or other materials subject to the following provisions:

(I) The rights or licenses to cut timber on a state forest shall be for one or more specified blocks in such forest, and may be sold by auction at such place as may be determined by the minister, or by tender, as the minister may think fit.

(II) Such rights or licenses in state forests shall be for a term not exceeding one year, unless in special cases the minister may think fit to extend such term, but no such extended term shall exceed three years.

(III) The upset rent shall not be less than £10 per annum for each block of 640 acres, and a proportionate amount for each 160 acres in excess of that area. And every holder of a right to cut timber shall, in addition to his rent, pay such royalty, according to the class of timber cut, at such times and places, and subject to such conditions, as may be fixed by the regulations.

(IV) Permits to cut and remove timber on timber reserves may be issued for a year, or any less term not being less than one month, at an annual fee of not less than £6, and a proportionate fee for shorter terms. Such permits may also be issued for any specified number of trees at a rate to be fixed by regulations for each tree. General permits may also be issued for the supply of saw-mills, for any term not exceeding one year, at an annual rate of £6, and subject to a royalty according to the scale fixed by the regulations.

(V) Licenses may be issued to cut piles or props to be used for mining purposes, for the erection of jetties, wharves, and for other purposes, on such terms and conditions as may be fixed by the regulations.

(VI) All fees or sums of money, except royalty, payable in respect of any rights to cut timber, or in respect of licenses or permits, shall be payable in advance.

And such regulations may prescribe the forms and conditions to be contained in any

such right, license, or permit, and may fix the rents or fees to be payable by the holder of any license or permit wheresoever the same shall not have been fixed by this act, and may provide for the forfeiture of any rights, licenses, or permits for the enforcement of rents, royalties, or fees for the removal of felled timber, for the licensing of sites for saw-mills and the agistment of stock, for the limitation of girth of trees to be felled, for the issue of wattle-bark permits for the marking of logs of felled trees, for the seizure and sale of timber cut without authority or upon which the royalty has not been paid, and for defining the power and privileges conferred by rights, licenses, and permits. And such regulations may also provide for the imposition of penalties and fines for the infringement or violation of any such regulation made under the authority of this act; but no such penalty shall exceed the sum of £20, exclusive of the value of the material taken or destroyed.

116. The breach of any condition or obligation, or the failure to porform any act or matter specified in any such right, license, or permit issued under the authority of this act, shall have the effect of forfeiting such right, license, or permit upon a declaration of forfe ture by the minister.

138. Any person, unless lawfully claiming under any subsisting lease or license, or otherwise under any act hereby repealed, or under this act, or under any act in force for the regulation of mining, who shall be found occupying any Crown land or land granted, reserved, or dedicated for public purposes, either by residing or by erecting any hut or building thereon, or by clearing, digging up, or inclosing or cultivating any part thereof, or by cutting timber, other than fire-wood, not for sale thereon, or by obtaining stone therefrom, or otherwise, or who shall strip or cause to be stripped the bark of any tree thereon, shall be liable, on conviction, to a penalty not exceeding £5 for the first offense and not exceeding £10 for the second offense and not exceeding £20 for the third or any subsequent offense: *Provided*, That it shall not be lawful for the holder of any leasehold under this act to obstruct any Government surveyor or other authorized person from entering upon such leasehold whenever such surveyor or authorized person may require to do so.

THE SICK-INSURANCE LAW AND ITS OPERATION IN GERMANY.

REPORT OF CONSUL MILLAR.

It is well known that the "*Krankenversicherungs-Gesetz*," or sick-insurance law, promulgated by the German Emperor in June, 1883, is one of a series of measures which the German Government believes will check the spread of social democracy and show the working classes that the benefits expected from a socialistic revolution are attainable under the present constitution of society. The novelty and importance of such a legislative step are obvious, and the success of the experiment is a matter of such interest to all states in which the working classes form a prominent factor that I have felt it my duty to submit the following brief sketch of the general principles of the law and of its application in detail within the limits of my consular district.

The sick-insurance law extends to persons of both sexes, minors or adults, and includes workers in mines, salt works, iron works, railroads, and internal steam navigation, handicrafts in general, factories and establishments in which steam or any elementary force (wind, water, gas, hot air, &c.) is permanently used as a driving power; in short, all hand workers, with the exception of clerks, salesmen, and similar employments, and even these may be included by resolution of the local authority.

The institutions recognized by the law are (*a*) all existing funds which conform to the regulations hereafter mentioned, (*b*) *Betriebskassen*, or factory funds, (*c*) *Ortskrankenkassen*, or local trade funds, and (*d*) *Gemeinde-Krankenkassen*, or communal sick-funds. The last three are new creations of the law.

The *Betriebskasse*, or factory fund, may be established by any employer of labor who employs at least fifty hands and makes membership of the fund a condition of service in his factory. The statutes must conform to the requirements of the law, and the action of the fund is subject to control by the central sick-insurance department, but the management rests with the employer and his hands.

The *Ortskrankenkasse*, or local trade fund, is intended to meet the numerous cases not covered by the *Betriebskasse*, or factory fund. The local authority is directed to establish such a local trade fund for every trade or union of connected trades in which there are at least a hundred members. The contributions to the fund are shared between masters and men in the proportion of one-third to two-thirds, and the masters are entitled to a proportionate representation of one-third of the votes in the general meeting and board of management.

For purposes of joint management the local trade funds of a district are allowed to form themselves into a union. A single board of management then conducts the business of all the local funds. These *Ortskrankenkassen*, or local trade funds, are the main feature of the new legislation. After their foundation they become independent bodies, subject only to the supervision of the central sick-insurance department, and as they are usually more powerful than the other funds of the district, they tend to fix the standard to which the rest must conform.

Ordinary day laborers, who belong to no special trade, are provided for by the *Gemeindekasse*, or communal fund, which only differs from the local trade funds in having a simpler organization and lower contributions.

Insurance clubs in existence when the act came into force were permitted to continue on condition that they revised their statutes within a limited time to comply with the standard provided by the law.

The standard of benefits offered by the fund is as follows:

In the *Ortskrankenkassen* or local trade funds:

(*a*) From the beginning of sickness free medical treatment and medicine, with such medical appliances (trusses, spectacles, &c.) as are necessary to enable the convalescent to resume work.

(*b*) From the third day of sickness pecuniary support for thirteen weeks to the extent of one-half the "average daily pay of the patient's class." The "average daily pay" is a legal standard fixed by the local authority. At the option of the management of a fund, the statutory amount of support may be increased to three-fourths of the average daily pay, and the time extended from thirteen weeks to a year. In certain cases treatment in a hospital may be substituted for the benefits under (*a*) and (*b*).

(*c*) The same provisions to apply to females for three weeks after the birth of a child, with optional statutory extension to six weeks.

(*d*) Burial money on the death of a member to the amount of twenty days' average pay, with optional entension to forty days' pay.

(*e*) Local funds may resolve to grant burial money on the death of a wife or child to the amount of two-thirds and a half respectively of the amount granted on the death of a member.

(*f*) Benefit (*a*) may be extended by statute to sick dependents of a member, who are not themselves members.

Illnesses deliberately or willfully caused (fighting, drunkenness, &c.) may exclude from the benefits of the fund.

In the *Gemeindekasse* or communal fund only benefits (*a*) and (*b*) are offered, and the period is limited to thirteen weeks.

The application of these general principles of the law vary of course according to the circumstances of each district, and I believe I shall

best exhibit the operation of the law by describing the organization and its results in the Leipsic district.

The industrial interests of Leipsic town and the adjoining parishes are so inseparable that the superior board of control—in this case the county government—ordered their union for the purposes of this act into one district, with the Leipsic city council as an organizing body. The Leipsic sick district accordingly includes the city of Leipsic, with thirty-seven adjoining parishes and a number of extra-parochial places within the same limits.

The first duty of the organizing body was to determine the number of funds to be established. Thirty-six sections were at first fixed on, but eventually only the following eighteen *Ortskassen* or local trade funds were established, each of them consisting of a group of related trades and occupations:

Stones and earths (minerals, coal, quarries, iron-works, potteries, glass, &c.).
Metal-workers.
Musical-instrument makers.
Chemical industry.
Textile industry.
Paper, leather, and India-rubber.
Bookbinders.
Wood and carving industry (including straw, ivory, brush, and other trades).
Foods and drinks.
Tobacco industry.
Tailoring and millinery.
Hatmakers, furriers, glove and shoe makers.
Barbers, hairdressers, and baths.
Building industry.
Printing and the allied trades.
Trade assistants in general, exclusive of those who have received a commercial education.
Transport and transit industry.
Waiters.

A *Gemeindekasse* or communal fund was also established for ordinary day laborers.

The next step was to determine the "average daily local wages," which the law fixes as the standard by which assistance is to be measured. This was a task of no small difficulty, and demanded a thorough investigation of the earnings of the work people. In a previous report I gave at length the results of the investigation for Germany into the wages of day laborers. The same work had to be undertaken for all classes of skilled workmen. Eventually six classes of work people were formed, with average daily wages and rates of contribution as shown in the following table:

Classes and actual wages.	Average daily local wages fixed for the sick insurance act.	Daily contribution of a member to the fund.
	Marks.	*Pfennig.*
1. Members whose daily wages exceed 3.50 marks	3.50	10.5
2. Members whose daily wages are between 2.50 and 3.50 marks	3.00	9.0
3. Adult males whose daily wages are less than 2.50 marks	2.50	7.5
Females whose wages are from 2 to 2.50 marks		
4. Adult females whose daily wages are from 1.50 to 2 marks	2.00	6.0
5. Adults whose wages are less than 1.50 marks	1.50	4.5
Boys and girls whose daily wages exceed 1 mark		
6. Boys and girls whose wages do not exceed 1 mark	1.00	3.0

The benefits granted by the funds are: Under (*a*), (*b*), (*c*), and (*d*), previously mentioned, the minimum provided by the act, except as regards the duration of help, which is extended to twenty-six weeks. Under (*e*), 15 marks on the death of a wife, 9 marks on the death of a child under fourteen. Under (*f*), free treatment and medicine for thirteen weeks.

The similar table for the *Gemeindekasse* is as follows:

Class.	Average daily local wages under the act.	Sick-money.	Daily contribution to the fund.
	Marks.	*Marks.*	*Pfennig.*
Men	2.00	1.00	3
Women	1.33½	0.67	2
Girls and boys	0.83	0.42	1½

This was the organization of the funds in December, 1884, when the new law came into operation. A further step, which was not taken till nearly a year later, may be mentioned here. This was the joining of the 18 funds in an *Ortskrankenkassenverband*, or local trade fund union. The reasons for this step will appear later on. A third, and, it would seem, very unpleasant duty was the inspection of the so-called "free funds," which had previously been formed either under an imperial act of 1876 or under some act of the local government. Where the statutes of a free fund did not come up to the requirements of the new act, the fund was required either to revise its statutes or dissolve. The majority of the funds possessed statutes more or less defective, and showed no disposition to accept either of the alternatives offered them. In the end they obeyed, but rather from compulsion than conviction.

These are the principal features of the work of organization. It will readily be understood that I have omitted all mention of the multitude of petty details and difficulties which had to be mastered. But by the spring of 1885 the new law was fairly in operation.

RESULTS OF THE LAW.

From the organization I now pass to the working of the new funds. The reception of the new law by employers and work-people was by no means cordial. The Leipsic Trades' Chamber (*Gewerbe-Kammer*), reporting on this subject in the middle of 1885, traces the dislike to three causes. It would seem that considerable confusion and delay occurred in preliminary stages of the organization, a misfortune which was perhaps unavoidable, considering the want of experience of all concerned. The period for the reorganization of the free funds had, therefore, almost elapsed before these funds were informed of their position, and great excitement arose when it was found that the majority of the free funds were rejected for more or less serious nonconformity with the new standard. The subscribers to these funds saw no alternative but to close the funds or pay a double subscription to the free fund and also to the local trade fund. The trouble does not seem to have been confined to Leipsic, for an amendment to the law was issued in January, 1885, extending the period for the revision of the free funds.

Even when this excitement was allayed there still remained a great indisposition on the part of the people to contribute to the state-established funds. They objected that they would lose their independence. In explanation of this it must be stated that in former years many masters had established funds as a means of using compulsion on their work-people to remain in their service. The workers, on the other hand, established the free funds to counteract the movement of the masters and insure freedom of movement and action. The people are hardly to be blamed for not seeing at once that the new law, by introducing a uniform standard for the whole Empire, rendered the masters powerless to use a fund as a weapon in industrial warfare. A third cause of the luke-warm reception of the act is said by the *Gewerbe-Kammer* to have been the reluctance of the masters to accept the duties imposed on them. Some even went so far as to exclude members of the local trade funds from their service. Others, however, headed by the Leipsic city council, voluntarily paid out of their own pockets the contributions of their people.

This opposition is now dying away, especially among the married members, to whom the funds offer substantial benefits. Among the younger members, however, and some of the masters, considerable apathy still existed at the date of the latest reports.

In the face of these difficulties the pecuniary prosperity of the funds can hardly be expected to be satisfactory; and we shall find that, in fact, they do fall short of the standard set up by the law. The general balance sheet of the eighteen local trade funds at the end of 1885 showed an income of 447,575.79 marks, and an expenditure of 346,740.61 marks, leaving a balance of 100,835.18 marks made up of 106,193.86 marks cash balance of fourteen funds, and a deficit of 5,358.68 marks on four others. From this balance of 100,835.18 marks, the law requires a reserve fund of 10 per cent. to be put aside. Estimating this 10 per cent. only on the fourteen funds that were worked at a profit, 37,536.03 marks required to be reserved, so that the funds seemed, on the whole, to be some 63,000 marks to the good. But against this has to be set an amount of 65,600 marks due to the Leipsic city council for organizing the movement; and if this be taken into consideration, the movement cannot satisfy all its liabilities and still lay by 10 per cent.

As the facts became clear during the course of the year, the managers of the funds took measures to put the organization on a sounder basis. Their first step was to petition the city council not to press for its money. Fortunately the municipality of Leipsic is wealthy, and an additional charge of 60,000 marks in one year's budget is not a ruinous matter. The city accordingly presented the funds with the expenses of organization and thus put them in a position of comparative solvency. The second step was the formation of the funds into a union in the manner prescribed by the act. In addition to the economy of management thus attained, the cash balance, although split among the sections for purposes of account, becomes practically available for all of them alike. A section which may be temporarily in difficulties is thus relieved of the necessity for immediately revising its rates or benefits and has a fund on which it can fall back for advances, a point not attended to in the act.

The result of the working of the united funds for the year 1886 was as follows:

	Marks.	Marks.
Income		513,304.93
Expenditure:		
Doctors' fees	104,759.21	
Medicine, &c	58,599.42	
Sick-money	200,788.33	
Burial-money	22,089.25	
Hospital charges	29,488.34	
Management	75,419.76	
Miscellaneous	10,100.27	
		501,194.58
Balance		12,110.35

An amount, however, which falls short of the legal reserve of 10 per cent. on 29,372.05 marks by 17,261.70 marks; so that, to keep up the reserve, the fund has again had to draw on the amount presented to it by the city. It is as yet too early to say how far the experience of these two years is normal; but in any case it is clear that the fund will only be able to save money by judicious and economical management. In this connection the sum of 75,000 marks for expenses of management seems unusually high, though it must be borne in mind that the act requires a great deal of clerical work to be done, and that the contributions in question are always small.

As a further elucidation of this important branch of the subject I add a table of the total receipts and expenditures of each section for the last two years, together with some other details which present interesting features.

Section.	1885.		1886.		Balance at end of 1886.
	Income.	Expenditure.	Income.	Expenditure.	
	Marks.	*Marks.*	*Marks.*	*Marks.*	*Marks.*
Stone and earth	28,994	31,494	35,677	50,858	−14,981
Metal workers	42,628	37,511	50,806	49,637	6,297
Musical instruments	7,108	6,056	8,980	9,228	799
Chemical	14,352	15,154	16,466	17,868	−1,408
Textiles	8,068	9,247	9,141	11,782	−2,641
Paper, &c	16,257	14,052	15,734	16,114	1,794
Bookbinders	9,008	6,129	11,084	12,343	1,569
Wood and carving	21,028	19,408	28,630	24,657	598
Foods and drinks	31,298	18,152	30,592	26,652	17,106
Tobacco	2,790	3,608	3,543	5,336	−1,798
Tailors, &c	24,402	18,127	28,130	26,969	5,425
Hats, furs, gloves, &c	11,366	9,206	15,159	13,496	3,794
Barbers	3,959	2,349	4,891	3,785	2,717
Builders	72,081	61,045	95,797	93,808	13,025
Printers	25,560	19,227	28,337	25,826	8,854
Trade in general	84,328	47,608	86,905	69,182	54,859
Transport	16,714	14,143	19,010	20,313	1,267
Waiters	27,245	14,180	29,273	21,861	21,028
Total	447,576	346,741	513,305	501,195	118,304

Items.	1885.	1886.
Members at beginning of year		21,197
Entered during year	50,747	34,551
Left during year	29,150	30,354
Number at end of year	21,597	25,394
Days of sickness during year	165,170	194,592
Number of members ill	6,621	9,356

Present number of members, about 37,000.

These figures throw a curious light upon some of the habits of the working classes. It will be observed that the fund reforms itself at least once every year, and that few, if any, of the original members can now be left in it. As regards sickness, it is remarkable that stone and earth workers, the chemical and textile industries, and tobacco workers have from the beginning had a deficit. Several sections have worked at a loss in the past year, and the principal stays of the movement are the waiters, food and drink workers, and the general body of business assistants. I should, however, mention that the management has informed me that porters, messengers, and similar persons are registered in each section, so that the figures must be used with a certain amount of caution when they are compared with other statistics of the same kind.

Besides the direct results of the sick-insurance law, one or two indirect results deserve a brief mention. One point is the prospective influence of the law on the older free funds, which as I have already observed, were frequently instituted as a check on the masters. There are signs that the work-people now begin to see that, with the loss of this special feature, the free funds have lost all reason for existence as a separate fund, and that the interests of labor are better served by concentration into one large solvent fund, than by division into a number of smaller and less reliable ones. These reasons have in fact already been given by managers for merging a special fund into the general local trade fund. The removal of the whole subject from the arena of party strife is not the least of the good results of the law.

A second point of importance is the influence of sick-insurance on the relief of the poor. Although the sick-funds were by no means intended as a kind of poor relief, it is only natural to suppose that the work of the funds may diminish to some extent the amounts hitherto spent in relief of the poor. In the only case in which, so far as I am aware, the statistics have been examined with this object, the result has been very favorable. In Hamburg, *e. g.*, the following calculations have been made. The number of sick poor who would have been cared for out of the poor rates in 1885 would have been on the average of the previous four years as follows: 293,223 days of sickness at 1 mark, and 38,464 at 75 pfennigs. The actual numbers, however, were only 230,123 and 34,254, so that the city computes the saving on the estimated number at 66,257.50 marks. To this, however, must be added a further sum of 14,514.50 marks, since the sick-funds under the insurance law pay 1.20 marks per day for their members instead of 1 mark or 75 pfennigs. The total estimated savings are therefore 80,772 marks; and, as the management of the fund only costs the city 59,099 marks, it is reckoned that Hamburg saves some 21,673 marks a year by the introduction of statutory insurance. Such highly favorable results cannot be expected in any other city in Germany, because in Hamburg an exceptionally large proportion of the population belongs to some insurance fund.

A comparison of the Leipsic *Krankenhaus* or city hospital for 1884 with those of 1885 leads to a similar result. The number of days of treatment diminished very slightly in 1885—175,017 as against 181,751 in 1884. The proportion chargeable to the poor rate sank from 51 per cent. in 1884 to 39 per cent. in 1885, and simultaneously the proportion borne by public or private sick-funds rose from 8 per cent. in 1884 to 24 per cent. in 1885. These results are not so striking as those from Hamburg, but they indicate a very appreciable effect of the new law on the relief of the poor.

A few figures, in conclusion, as to the present condition of the movement in Germany may be of interest. The total number of persons insured under the act is as follows:

Items.	Number of members.	Proportion per 1,000 inhabitants.
Local trade funds	1,534,888	32.8
Factory funds	1,261,200	26.9
Registered funds (act of 1876)	730,722	15.6
Communal sick-funds	586,584	12.5
Funds under acts of the local government	143,785	3.1
Guild funds	24,879	0.5
Building funds	12,115	0.3
Total	4 294,173	91.7

The distribution among the individual states is, however, very unequal. In Prussia and Saxony the local trade funds and the factory funds are at the head. To these approximate Wurtemberg, Weimar, and Mecklenburg, in which the local trade funds lead, but the factory funds are only slightly represented. In Bavaria the communal funds include two-thirds of the total number insured. In Oldenburg the communal funds also lead, but are closely followed by the local trade and factory funds. In Hesse and Brunswick the registered funds are in the majority, and the same is the case in Hamburg. The figures for Hamburg are, indeed, so anomalous that I give them in detail, premising that the immense preponderance of the registered funds is due to the fact that nearly all the large "centralized funds" in Germany have their headquarters in Hamburg:

Proportion per 1,000 *inhabitants insured under the sick-insurance law in Hamburg.*

Registered funds	385.5
Funds under local government acts	47.4
Local trade funds	28.2
Factory funds	22.0
Communal funds	10.3
Guild funds	2.6
Total	496.0

In Baden and Alsace-Lorraine the factory funds are the chief instrument of insurance. The total number of individual funds in the Empire was as follows:

Communal funds	7,024
Factory funds	5,478
Local trade funds	3,693
Registered funds	1,805

SAM'L ROLFE MILLAR,
Consul.

UNITED STATES CONSULATE,
Leipsic, May 19, 1887.

COAL AND IRON STATISTICS OF UPPER SILESIA.

REPORT OF CONSUL DITHMAR.

COAL.

The 80 coal mines in the district employed in 1885 a total of 40,214 laborers—36,466 men and boys and 3,748 women and girls; aggregate wages, $5,324,112.36; average per laborer, $132.39. The output of coal amounted to 12,733,531 tons, worth $11,245,555.74; average value per ton of coal, 88 cents; percentage of wages to total value of coal mined, 47.34; number of tons produced per head of laborers, 316.6.

STATISTICS FOR TWELVE MONTHS OF CONSOLIDATED HOHENLOHE MINE AT BELKAW.

(Owner, Prince Hugo Hohenlohe.)

Number of steam-engines, 11, with 1,192 horse-power. Of the engines, 8, with 310 horse-power, are for mine-working; 5, with 855 horse-power, for pumping, and 3, with 27 horse-power, for other purposes. Number of pit horses, 48. Number of laborers—males, 860; females, 93 (all over 16 years of age). Aggregate of wages for the year, $135,136; average per head, $141.80. Material used—timber, 6,368 cubic meters; powder, 76,620 kilograms; dynamite, 2,186 kilograms; illuminating oil, 27,235 kilograms; illuminating petroleum, 8,165 kilograms. Tons of coal mined in the year, 360,165.

Coal used by employés and for boilers, 5,647 tons; sold at the mines, 20,178 tons; sold to furnaces, 125,013 tons; sent by railway, 200,274 tons; total amount sold, 345,465 tons; price per ton at mine, according to size, $1.30, $1.25, $1.09, $0.90, $0.24; value of output, $307,681.

IRON ORE.

The 51 mines worked during the year employed 3,868 laborers, of whom 2,358 were males and 1,510 females. Their aggregate wages amounted to $281,621.92, an average of $72.81 per head.

The production of ore amounted to 756,404 tons, of a value of $666,387.62, an average of 88 cents per ton; amount of ore produced per head of the employés, 181.39 tons.

STATISTICS FOR TWELVE MONTHS OF MIECHOWITZ MINE, NEAR BEUTHEN.

(Owner, Von Thiele-Winckler.)

Number of engines, 1, of one horse-power; number of laborers—males, 101; females, 7—all over 16; aggregate wages for the year, $11,777; average per head, about $109. Fuel used, 30 tons broken, 316 tons pea coal—total, 346 tons; timber used, 1,108 cubic meters; dynamite, 348 kilograms; illuminating oil, 2,625 kilograms. Product, 27,690 tons brown hematite ore; amount sold, 19,017 tons; value of year's output, $29,797.

SMELTING FURNACES.

Of the 47 smelting furnaces in the district only 32 were in blast, with 124 steam-engines of 11,819 horse-power, and 2,853 male and 883 female employés, whose total earnings were $520,595.25, an average of $139.35 per head. The production of iron amounted to 412,524

tons, of a value of $5,008,786.92. The consumption of fuel per ton of iron produced was 1.811 tons. The materials used in producing the iron were: Ore, 1,050,219 tons; broken and scrap iron, 2,319; slags, 201,553; limestone, 370,641; dolomite, 102,220; coal and coke, 747,218 tons.

STATISTICS FOR TWELVE MONTHS OF THE JULIA FURNACE, AT BOBREK, NEAR BEUTHEN.

(Owners, Caro & Son.

Furnaces in blast, 3; steam engines, 15; total horse-power, 1,150; laborers over 16 years—males 289, females 127; under 16 y ars—males 9, females 1; total, 426. Aggregate of wages paid, $49,980, an average of about $117.33 per head.

Smelting materials: brown hematite ores, 78,815 tons; clay ores, 4,265 tons; red hematite, 245 tons; spathic ores, 246 tons; magnetite, 20 tons; total ores, 83,891 tons; old and broken iron, 920 tons; puddle and other slags, 21,077 tons; limestone, 40,240 tons; dolomite, 2,658 tons.

Fuel used for smelting—1,230 tons coal, 66,045 tons coke; for making steam and for other purposes, 1,985 tons coal, of which amount 1,545 tons was pea coal.

Product: 31,073 tons pig-iron; 205 tons lead, containing silver; 451 tons tutty and zinc incrustation; 321 tons zinc dust. Value of the product: iron, $369,771; lead, $14,566; tutty, &c., $10,734; zinc dust, $1,547; total, $396,608.

PUDDLING AND ROLLING MILL.

STATISTICS FOR TWELVE MONTHS OF THE IRON WORKS HERMINE FURNACES, A PUDDLING AND ROLLING MILL AT LABAND.

(Owned by the Upper Silesian Iron Industry, a joint-stock association at Gleinitz.)

The work are situated near the Upper Silesian Railway, which has tracks running into the establishment. The Klodnitz Canal passes one side of the works, and on this boats carrying from 70 to 90 tons convey rolled iron to Stettin, Berlin, and Magdeburg, and rolled wire to the company's wire works at Gleinitz.

The works contain 22 puddling furnaces, 13 smelting furnaces, 4 steam hammers, 14 steam-engines of 12-horse power, 1 water-wheel of 40-horse power, 46 boilers of various construction, 4 rolling machines for hoop, round, and square bar iron, 1 wire-rolling machine, 2 smithies, 1 turning shop with 10 lathes.

Of material consumed during 1886, there were 59,693 tons of coal, 25,488 tons of pig-iron, and 8,804 tons of old and broken iron bought from other works.

Number of managers, 10; book-keepers and clerks, 6; puddling and rolling mill hands, 730; masons, turners, black and lock smiths, 80; warehouse and loading laborers, 30; women employés, 11; together, 851 employés.

Tramway horses, 5; other horses, 4; weekly cost per horse, from $6 to $6.40.

Annual product of the works: 17,154 tons commercial iron of all descriptions; 8,069 tons wire; total, 25,223 tons, of the value of $600,207.40.

Aggregate of wages paid in 1886, $107,100.

HENRY DITHMAR,
Consul.

UNITED STATES CONSULATE,
Breslau, May 7, 1887.

METAL TARIFF IN RUSSIA.

REPORT OF MINISTER LOTHROP.

The new Russian tariff on iron and steel and goods into which these metals enter has just gone into operation, and it is thought it will considerably affect the foreign trade of the country. The substance of the law has been printed in the London Times, and I send the same herewith. The object of the law is (1) an increase of revenue and (2) to foster and protect the domestic industry of the Empire in all the products taxed. It is another step in the ruling policy that conceives that the Empire should supply all her wants within herself.

As the trade of Russia with the United States has sunk almost to a minimum, it may have no other result with us except to discourage hopes of any revival of that trade. Russia may still be obliged to buy cotton from us, though she seems to expect successful results from her cotton-raising in Central Asia.

But the effects may be very injurious to other countries. Germany has hitherto largely supplied the Russian market with tools and manufactured ironware. The Russians complain that these were largely of inferior material and workmanship, and that they were put on the market at such low prices that they drove out better wares to the great injury of the country. The peasants were not discriminating purchasers, and were likely to buy the cheapest goods.

The new tariff, coming at this time, is construed by the German press to have a special significance and to be actually hostile to Germany. I also inclose herewith a paragraph from an article in the Cologne Gazette, which may be taken as a fair expression of German views and feelings.

GEO. V. N. LOTHROP.

UNITED STATES LEGATION,
St. Petersburg, May 16, 1887.

ST. PETERSBURG, *May* 7.

A new law is promulgated to-day raising the import duty on pig-iron, wrought iron, steel, and articles manufactured from these metals.

The following are the rates at which the new duty is fixed: Ore, except graphite, copper ashes, and iron dust, 7 copecks (gold) per pood; cast-iron bars, broken iron, or iron filings, when imported by sea, 25 copecks, and when by land 80 copecks; iron, whether in plates, bars, and puddling pieces, or broken, 50 copecks. Sheet iron and iron plates more than 18 inches wide, iron in bars over 18 inches in width or length, or 7 inches and above in thickness, as well as bar iron ¼ inch to ½ inch wide or thick, 70 copecks; steel of any kind in bars and cast in pieces or broken, 50 copecks; sheets and plates above 18 inches wide, worked steel above 18 inches wide or long, or 7 inches and more thick, as well as steel bars ¼ inch to ½ inch thick, 70 copecks; worked cast iron, iron castings which have not been subject to any further process of manufacture, such as grates, plates, tubes, girders, columns, fittings of cast iron for steamships, dredging machines, and railways, 70 copecks; manufactured articles of cast iron, either filed or covered with zinc or other common material, with or without wooden, copper, or bronze parts, 140 copecks; iron and steel manufactured articles, forged or cast, either not filed or filed only on the sides and edges, and not sub-

jected to any further process of manufacture, such as anchors, chains, wire ropes, nails, hooks, bells, and mortars, as well as fittings and appliances for steamships, dredging machines, and railways, 120 copecks; blacksmiths' ware, 140 copecks; wrought iron and steel manufactured articles, with or without wooden, copper, or bronze parts, if weighing more than 5 pounds, 140 copecks; scythes, straw-cutters, gardening knives, sheep-shears, shovels, rakes, hatchets, and forks, 140 copecks; mechanics', artists', and manufacturers' tools, 140 copecks; machines and apparatus, except such as are used in agriculture, and models for the same, locomotive tenders, steam fire-engines, and other fire extinguishers; all other apparatus and machines intended for use in manufactories and not specially mentioned above, whether of cast iron, wrought iron, or steel, with or without parts made of other metals, and all machinery fittings, except those of copper or such in which copper is the principal material, 140 copecks; locomotives, 200 copecks per pood.

The new law directing the above modifications provides that the import duty on cast-iron bars, broken iron, or iron filings, which amounts to 25 by sea and 30 gold copecks by land, shall not be reduced before January 1, 1898. It further instructs the minister of imperial domains and finance to draw up as soon as possible a scheme for the adoption of measures in the districts on the western frontier with a view to prevent the further development of the existing and the establishment of new smelting and iron works which use foreign material and employ foreign workmen.

Much more outspoken and vehement on the subject is the Cologne Gazette, which writes:

"The new Russian customs measure is an event of very serious importance—a blow directed against German industry within our own Empire, as well as in Russia, where it will almost have an annihilating effect—but at the same time also a blow in the face of previous Russian policy and its present official representative. The measure in fact shows that it is the influence of M. Katkoff which is supreme over the power and will of the Czar, and not the moderate party headed by M. de Giers. Brutal measures like those which have now been carried by the present finance minister of Russia cannot but react on her political relations to the neighboring State against which they are directed, and perhaps it will not be wrong of us to assume that they were expressly devised for this purpose. But at any rate these Russian measures have immensely strengthened the movement now on foot among us for doubling our duties on foreign grain."

ADULTERATION OF WINE IN SPAIN.

REPORT OF CONSULAR AGENT HALL.

This question, which for some time has occupied the attention of the press throughout Europe, is worthy of treatment not only by those interested in the wine trade but by all in support of public welfare and hygiene.

This district of Jerez de la Frontera, whose existence is greatly, if not entirely, dependent on the wine trade, is to-day almost a nullity in comparison with its standing of but a few years ago, a repute now menaced with near and certain death because of the adulteration of wines.

The celebrated and world-famed Jerez, or sherries, which for years have on their own merits stood first of all beverages, are now sought with comparative indifference, and often are regarded with depreciation and distrust incurred by the practice of adulteration as now extensively carried on.

Doubtless the decline in the Jerez wine trade is in part due to the development of wine culture in other countries, the liquids of which somewhat resemble the Jerez; but the discredit now weighing on the latter has its true origin in the adulteration of wines from other localities that are made up with Berlin spirits and forwarded to

markets as Jerez brands. But the discredit oppressing the genuine Jerez is sustained by its very home exporters; for temptation, incited by commercial impulse and opposition, is offered with great inducement to shippers, even of standing, to fulfill demands for inferior wines of other localities under Jerez brands, to thereby bring in orders for the high-priced article, yet there is not one who does not recognize the evil incurred by this dealing, and many long-established and reputed vintners, conscientiously jealous for the merited fame of their wines, close their cellars for lengthened periods rather than allow a butt of inferior quality to leave them under their brands.

The pernicious effects of Berlin spirits are generally recognized and palpably observed in the traffic where it is employed in mixing low wines; for the working men in wine-cellars are permitted at fixed hours to consume the pure wines they are constantly handling, and enjoy the best of health, manifesting not even symptoms of the unhappy consequences observed in laborers, who to satisfy their thirst must resort to cheap wines that may be considered veritable poison so disastrous are the effects of the Berlin spirits with which they are unscrupulously fortified. The laborers in this district, where the wine trade chiefly supplies occupation, average excellent physical condition; what, then, must accrue if the evil of adulteration creeping into this locality be permitted to take deep root?

All wines must be more or less fortified with spirits, especially for exportation. And, bearing in mind that pure spirits of wine (produced from the grape) prices 97 pesetas per hectoliter, and that Berlin spirits (produced principally from potatoes and laden with the deadly amilic alcohol) prices 30 pesetas per hectoliter, economical motives naturally conduce to employment of the latter for fortifying low wines, which otherwise would not only be profitless but ruinous. Such is the inferiority of these wines that they should either be sent to the still or let turn to vinegar, and should be utterly condemned as a beverage.

This step once realized, Berlin spirit could no longer work its evil influence in our wine trade.

Could wine-consumers be prevailed upon to seek from standing houses the genuine Jerez wines, according them their fair prices, and not allowing false mixtures to be imposed on them, health and pleasure would thus be derived, and the famous sherry wine, now so run down by unfair trade, would soon regain its old and honored rank above all other wines.

Strenuous efforts are being made by the chamber of commerce of this city, aided by prominent and reputed wine-exporters, to put an end to adulteration of wines and combat the nefarious proceedings of unscrupulous dealers in the article; and although much depends on the customers to improve the present decline in the trade, the great necessity is for the Spanish Government, recalling the adage, *Salus populi suprema lex*, to take decisive measures, acting by the judgment of medical universities and sanitary commissions, all eminent European hygienic authorities, and, by no means last of all, the voice of the people, to condemn the use of Berlin spirits for any portable purpose; to increase import and octroi duties; to enact such laws as shall compel all imported spirits to be disinfected; to establish laboratories in the principal ports of the sea, where all exported wines shall be analyzed and their purity tested. Without these

remedies promptly enforced the present condition of the wine trade must continue from bad to worse, and every day witness increase of the discreditable practice of adulteration of wines.

J. A. HALL,
Consular Agent.

UNITED STATES CONSULAR AGENCY,
Jerez de la Frontera, May —, 1887.

[Translation of address directed by the Chamber of Commerce and Industry of Jerez de la Frontera to the minister of state, Madrid, published in the Jerez de la Frontera Guadalete, Wednesday, April 27, 1887.]

To his excellency the Minister of State:

YOUR EXCELLENCY: The official Chamber of Commerce and Industry of Jerez de la Frontera, desirous of perfect accuracy in its reply to your excellency's circulars of dates January 10, February 8, and March 1 of the current year, has considered it befitting to first consult the opinion of the most competent local wine negotiators. The delay originating in this circumstance renders it now possible to embrace in one single communication all the topics to be treated; a delay, moreover, justified, inasmuch as the points under consideration invariably have reference to the same most important object of preserving the purity and credit of Spanish wines.

With regard to the far-famed wines of the district of Jerez, to-day they are less appreciated than before, and the opinion is unanimous that this great decline in their value and commerce is to be attributed to the enormous importation of German spirits; this fact has been demonstrated on various occasions in ample and sensible ways; and also has recently been declared in the congress of deputies by those illustrious sons of this place, the Duke of Almodóvar del Rio and the Marquis of Mochales, interpreting faithfully and eloquently the convictions and sentiments of the public.

But for the obnoxious aid of these industrial spirits that offer every facility to adulteration, the wines of poorer quality in the province and its vincinity could never have flooded this district, substituting in great part such miserable liquids for the genuine Jerez, for many years and with such discrimination made and aged in its celebrated cellars. Many musts even within our city limits, that neither could nor should have any other destiny than the distillery, or to be let turn to vinegar, are to-day employed with the adulterated mixture obtained from Berlin, to be offered to consumers under names unlawfully appropriated; and by their cheap price make competition still more iniquous and injurious to commerce of good faith, the honored commerce to which our old and reputed exporters render and have ever rendered respect.

Your excellency rightly observes that the interveners in the business take the greater part in this discreditable work; but all effort of our vintners cannot avail to abolish the decided influence exercised in various markets, as long as the ways by which it is planned and effected are not obstructed and destroyed by effectual measures. And this is what the producing district hopes of the high powers of State and of your excellency's zeal and initiatory support.

It is an incontrovertible and well-proven truth to all who have occupied themselves in the study of wine, that alcohol produced in it by fermentation is found to be intimately and truly assimilated with all its other natural elements; and that this condition differs greatly from that which the same alcohol affects, when, having been obtained from distillation, it is added to these liquids to improve and preserve them. The mixture is then verified by a long and incomplete process; but the adaptation or assimilation of the spirits is thus more perfect with the indispensable condition of cleanliness, and preserves certain essential etherous oils natural to the wine that at the same time contribute to give it savor, bouquet, and characteristic spirit. The absolute alcohol, or anhydro, is by every means unfit for improving and strengthening wines. Spirits produced from grains, potatoes, beets, and all so-called industrials, lack entirely the aforesaid benefiting ethers; on the contrary, they are more or less accompanied by injurious substances; therefore, to alcoholize the wines, the only spirits that should be used are those from the must, or, even better, those that have not obtained excessive strength. So well of old our intelligent vintners recognized this fact that they employed only spirits once distilled, and even preferred to strengthen their wines with others very old, to doing so with alcohol.

This chamber of commerce does not consider itself competent to define accurately the more or less injurious qualities of industrial spirits, in that economical and mercantile objections are chiefly those that it can allege against this spurious and unnatural alcoholization of our wines; but so much has this question been debated by scientific schools and societies as well-nigh to arrive approximately in this respect to an important distinction between the spirits that contain noticeable quantity of alcohols termed superior, whose intoxicating power appears complementy proved, and these spirits containing other alcohols that by virtue of scrupulous analysis are found to be almost pure ethyl, and under the point of hygienic view offer no properties seriously differing from those of the wine-alcohol that is brought to the same excessive strength. The process, then, to which these two classes of spirits must be subjected to admit of their importation and application it appears should be varying; because if the latter class, added to wines or destined to liquors, can effect adulteration in a certain inoffensive way, the employment of the spirits abounding in amylic alcohol should be considered a decided crime, and for these, with the object of preventing so much harm, their complete disuse is necessary, as proposed by the chamber of commerce of London. But as in fact no one class nor another can ever, as has before been implied, be found to contain vestiges of those ethers associated solely and exclusively with light wine alcohol, and that are indispensable, although in small quantities, to the unison of the results, it is clear that industrial liquids of both classes, distilled or not distilled, should be equally proscribed to wine concoction.

It is certain, then, your excellency, that it is necessary to lay down the law in such a manner that, by encouraging the production of spirits of wine, it shall be impossible to substitute for them even the purest of other origin. And to advance so sensible and imperious a necessity there can be no more efficacious encouragement than the increase of importation and octroi duties on all industrial alcohols. If to this are opposed the international treaties—and these cannot be set aside—our evil has no remedy; or it will not come until so late that that which should be the principal Spanish industry may have first succumbed. Other methods would not be sufficient to preserve the manufacture of the national alcohol, while it is crushed in competition based on confusion and deception. By the term national alcohol is understood only that produced from the grape; for in the soil and climate in which the vine renders the most sugary fruit, this other industry should never be permitted to take root, that, deriving its primitive elements from agricultural products, of great elementary worth and commodious transportation and preservation, is only feasible in the cold and foggy regions of the north.

May the taxes embarrassing our agriculture be moderated and equally distributed; may the means of communication be increased; may the large part of our country's area that remains uncultivated, unpopulated, and almost unproductive be opened up to industry; may transportation be facilitated and rendered less expensive by our privileged railway companies; may an agricultural credit be established, and the now oppressed laborer be enabled to live free from the loans of usurers and the disdain of capitalists; may technical knowledge of productive application be diffused; and then we can enter the economical lists with the conditions to which nobility and honor are bound.

With regard to adulteration in general, leaving now questions that it is not possible, nor perhaps pertinent to treat profoundly at this moment, the chamber is of opinion that all wine should be considered adulterated and not genuine that contains substances foreign to the must of the grape, as also all that may have received in excessive quantity materials analogous to those that constitute the natural product. To determine, nevertheless, with perfect clearness, even in this fundamental criterion, what is lawful in the perfecting of wines, and what is judged fraudulent and penal, is required the slow and careful study that already doubtless has been given the subject by competent and worthy parties named with that object by his excellency the minister of fomentation. But to defend the various especial wines, the genuine products of every district, against fraud and imitation, two things are necessary: The establishment of local brands, and analytical departments; and, above all, to permit this chamber to address a few words to your excellency.

Nothing is of such interest to the producing district as the preserving the typical character of wines that have deservedly won it universal fame and renown; and to nothing is it so in duty bound as to be vigilant that in the markets it may be always known how to distinguish and discriminate them. If this knowledge be lost, confusion and distrust enter, and with these the discredit and ruin of the legitimate article. Sufficient deplorable example and demonstration of this truth is offered in the case of the Jerez vineyards, once the richest and most highly esteemed in the world, and to-day of such incredible depreciation and decay that,

renowned though they are, there is not to be found one who will purchase them for even the tenth part of what they paid in the days of their prosperity.

To continue: Brands determining origin, if opportunely established and prudently applied, would have in great part avoided so many misfortunes an l such prospective ruin. Experience has proved that the guarantee of especial brands, for all they may be respectable and respected—and there exist many and of ancient date with these requirements—does not suffice to prevent the artifice of adulteration; and thus to all classes of vintners is of importance the attainment of a plan often proposed but without that perseverance conducive to its execution. This chamber of commerce has to consider so original a case with the attention and tedious examination due to it; moreover, according to the opinion of experienced persons, our legislature proves itself inefficient as regards what pertains to local brands that, as a question of general interest and even of international rights, presents a new aspect. What is desired is a law that shall authorize these brands, regulating them in such a manner that, insuring the purity and good name of legitimate merchandise, rise may not be given to unjust rights and exclusions, and that shall protect them under diplomatic stipulations in our own kingdom and in those abroad. The object is worthy your excellency's noble and patriotic encouragement.

With the same end is recounted the establishing of enological stations and chemical labora ories, in which industry may encounter elements of study and progress and means of analysis and comprobation. The proposition on the subject made by the Chamber of Commerce of Huelva, that these departments be established in institutes of secondary instruction, an idea benevolently protected by your excellency and recommended for execution to the ministry of fomentation, is without doubt worthy of all praise, but perhaps in many cas s it does not satisfy the requirements that the depa tments are called upon to fill, above all if local brands be instituted. The analytical tests frequently necessary exact laboratory experience and assiduous and unremitting labor more than theoretical knowledge. The relation of these departments to the centers of exportation is an item that should be taken into account, as also their relation with the societies and syndical corporations of vintners that may be formed. It would be convenient that the enological stations, and even the analytical departments annexed to them, should be independent, thus preventing access to the speculative educat on that is propagating in our country to the perceptible detriment of agricultural and industrial development. If the state would submit to some sacrifice in the matter, it would only comply with what the richness most contributing to the public revenues is entitled to exa t.

This chamber draws to a close its already lengthy dissertation by summing the chief arguments it has had the honor to lay before your excellency into a reply to the various points of your excellency's before-mentioned circulars; arguments that can substantially be reduced to the four following conclusions:

1. That to benefit and strengthen our musts in cases and in measures that for these operations may be requisite or convenient, the most prominent local theorists, as well as the oldest and most experienced negotiators, are unanimous in recognizing that no other spirits should be used than those obtained from the fermented juice of the grape; and even these only of strength permitting them to retain the ethers that, favoring assimilation to the wines, bring up to par their flavor and bouquet.

2. That the industrial spirits, whatever their origin and degrees of strength, can never be substituted for those of the grape, lacking absolutely, as they do, the chief ethers above specified, and therefore their mixture with natural wines should be prevented as much as possible as constituent of adulteration, and that, in respect to those spirits containing so-called superior alcohols in noticeable quantities, as also the amilico—thus including those commercially styled three-five, three-six, and so on, that proceed from grains, potatoes, and beets, and do not reach 40° Cartier nor 95°.9 centesimals—should be assailed and penalty severely imposed upon their use for strengthening of wines and for perfecting of liquors, regarding it as a grave attempt against moral and public hygiene.

3. That to develop in our land the making of light-wine alcohol it appears both indispensable and adequate to tax with all possible duties and imposts other national and foreign alcohols, whether in the importation, application, or consumption; to declare entirely free the introduction of distillery implements, and to except portable stills from taxation, as also those connected with wine culture and development; to reduce the enormous revenues imposed on the few manufactures that to-day exist so lifelessly, and to foment the more abundant production of pure spirits of wine by every possible means of giving impulse and healthy stimulus.

4. That to arrest the frauds and adulterations and give new birth to confidence in commerce both at home and abroad, a law for local brands is needed that shall

guarantee the procedure, purity, and worth of legitimate wines, dispelling the darkness and confusion that to-day reign in the market; and to aid effectively these plans, it is necessary that enological stations and chemical laboratories should be established in the chief producing and exporting centers.

Such is, according to its understanding, the information that this chamber of commerce is permitted to present to your excellency's superior and illustrious consideration.

God protect your excellency many years.

Jerez de la Frontera, April 5, 1887.

Your excellency,

JOSÉ DE BERTEMATI,
President.
JUAN REBUELTOY ABRIL,
Acting Secretary.

LIQUOR LAW OF SWITZERLAND.

REPORT OF MINISTER WINCHESTER.

The new law controlling the manufacture and sale of spirits in Switzerland, submitted under the *referendum* to a popular vote, was on yesterday (Sunday) accepted by a very large majority. The law thus enacted is substantially as follows:

ARTICLE 1. The right to manufacture and import liquors, the manufacture of which is hereby placed under federal control, shall belong exclusively to the Confederation. Liquors delivered by the Confederation to be used for drinking shall be sufficiently rectified and inspected. As for the supply covered through the domestic production, the Confederation transfers to local authorities and trade the necessary delivery, as per Article 2.

ART. 2. Nearly one-quarter of the consumption of liquors shall be provided by contracts of delivery, which the Confederation will conclude with domestic producers. The deliveries are to be published for acceptance by the federal council, in lots of not less than 150 hectoliters and not exceeding 1,000 hectoliters of pure alcohol. Each lot will be assigned to the party presenting the required guarantee and making the best offer for the lot. In determining the offers submitted, the distillation of domestic raw material and distillation by agricultural associations are to be preferred. No bidder will receive more than one lot.

ART. 3. The importation of superior liquors may be permitted to private persons under conditions fixed by the federal council, and for a certain monopoly fee of 80 francs per liter one hundred gross and the import duty, regardless of the degree of a whole.

ART. 4. The Confederation will deliver the liquor in quantities not less than 150 liters. The price will be regulated by the federal council from time to time, and published in "*Feuille Fédérale.*" The price shall not be less than 120 francs and not more than 150 francs per hectoliter of pure alcohol, without the cask.

ART. 5. In the exportation of products, in the manufacture of which dutiable alcohol has been used, the quantity of such alcohol is to be ascertained and the duty paid on it, returned at the close of the fiscal year. This reimbursement will be made by the federal council on the basis of the average difference between the selling price and the purchase price of the imported spirituous liquors. No such return of duty on alcohol will be made in case of exportations of less than 20 liters.

ART. 6. Alcohol intended for mechanical or domestic purposes, taken from the cheapest quality and as raw spirits, will be furnished from the warehouses of the Confederation, in quantity not less than 150 liters, at cost price, and, when imported, with the addition of the import duty. The federal council will regulate as to the test of alcohol falling in this class.

ART. 7. Hawkers' trade in spirituous liquors of all kinds, as well as the retail sale in taverns, distilleries, and such other establishments where such retail sale is not in natural connection with the sale of other commercial articles, is hereby prohibited. The retail sale of raw spirits and that made by distilleries by virtue of Article 8 is excepted.

ART. 8. The sale of spirituous liquors of all kinds in quantity not less than 40 liters will be regarded wholesale. The sale of smaller quantities, or retail sale, is subdivided into—

(1) Retail sale in taverns to be consumed there.

(2) Retail sale to be carried away. License for retail in taverns is to be granted by the cantonal authorities under a tax proportioned to the importance of the trade and the amount sold. This tax will be fixed by the cantons until it is placed under federal regulation. Distillers who, in one year, do not manufacture more than 40 liters liquors not subject to the federal duty, are at liberty to sell their product in quantity not less than 5 liters. The casks in taverns must be stamped with the official stamps.

ART. 9. The cantons will be charged with the supervision of the trade in spirituous liquors delivered by the Confederation, as well as to the manufacture and sale of liquors not subject to the federal duty.

ART. 10. The execution of the law in its other parts devolves on the federal council, which will provide the necessary machinery and regulations. The federal council can claim the co-operation and assistance of the cantons, and, in event of so doing, all expenditures incurred by the cantons must be refunded to them by the Confederation. The Confederation will advance to the monopoly administration the sum necessary for the execution of the law, the sum so advanced to bear interest and to be redeemed in a reasonable time.

ART. 11. The Confederation collects the duty on all imported spirituous liquors and renders an account of the expense of the monopoly administration, as well as the increase of the customs expense occasioned by the monopoly.

ART. 12. The net income of the monopoly administration will be divided, under the limitations of the constitution, among the cantons according to population as shown under last federal census. This distribution will take place at the end of each calendar year.

ART. 13. The cantons must report annually to the federal council as to the disposition of the 10 per cent. of the amount received by them, which, according to Article 32 *bis* of the federal constitution, must be applied to suppress intemperance. These reports shall be submitted in printed form to the federal council.

ART. 14. Whoever violates the provisions of this law, either in the manufacture of spirituous liquors without authority, or fails to deliver to the Confederation the entire quantity he may at any time manufacture under the authority granted him, or procures an unjust return of customs duties, as provided in Article 5, or uses the raw spirits under Article 6 for other than the specified purposes, or procures spirituous liquors in an illegal manner, shall be subject to a fine from five to thirty times the value of the amount so improperly obtained. If this cannot be ascertained the fine will be from 200 to 10,000 francs. In case of a repetition of the offense or under aggravating circumstances, the fine may be doubled and an imprisonment of six months added. The attempt to violate or evade the provisions of the law shall be subject to the same penalties.

ART. 15. In addition to the cases referred to in Article 14, each violation of the law or the regulations relating to its enforcement shall be subject to a fine from 20 to 500 francs; this fine will be increased to 50 or 1,000 francs where resistance is offered to the execution of the law, under limitations of Article 47 of the federal penal code.

ART. 16. One-third of the fines realized under the law shall go to the informer, one-third to the canton, and one-third to the commune in which the offense was committed. If there be no informer, then two-thirds goes to the canton where the offense has been committed by the officers or the employés of the customs administration; the fines will be apportioned under Article 57 of the canton law of August 27, 1851.

ART. 17. Proceedings in all cases for violation of the law or the provisions for its carrying out shall be had in conformity with the federal law of 30th June, 1849, for violation of fiscal and revenue laws.

ART. 18. The proprietors of existing distilleries shall be indemnified by the Confederation for the depreciation in the value of their property caused by the enactment of this law. In reaching this depreciation the profits in the business shall not be taken into account. The claim to indemnity is limited to distilleries established previous to 1885 and in operation at that time, and the proprietors of which renounce and surrender the authority granted under Article 32 *bis* of the federal constitution. Where an agreed indemnity is found impracticable, it must be referred to a commission of estimates. These commissions of estimates or values shall be composed of three members, one to be appointed by the federal tribunal (supreme court), one by the federal council, and the third by the cantonal government in which the property is located. Against the decision of the commission there will lie an appeal by either

party to the federal tribunal, within thirty days after the rendering of the same. If not done within this time the opinion of the commission will be final. The procedure, both of the commission and the federal tribunal, shall be by a special regulation of the federal tribunal, based on the law of May, 1850, concerning the condemnation of private property.

ART. 19. The Confederation has the right to acquire the stock of monopoly spirituous liquors in the country, after the law goes into effect, amounting to over one-half hectoliter, with indemnity, where the owner is unwilling to pay the required taxes. If the Confederation sees proper to enforce its right of acquisition, the proprietors must give notice of their stock; any concealment of same will involve complication and penalty under Article 14. The price to be paid for liquors so appropriated by the Confederation will be fixed by experts appointed by the federal council.

ART. 20. The federal council is charged with the full execution of this law.

ART. 21. The federal council is charged, in conforming with the provisions of the federal law of June 17, 1874, to promulgate this law and fix the date when it shall go into effect.

This law, after a long discussion in the Federal Assembly and referred to several commissions, was agreed upon as a compromise between the different shades favoring the monopoly of the manufacture and sale of spirituous liquors and its opponents. The absolute control over the manufacture and rectification of alcoholic spirits is vested in the Confederation, with indemnity to distillers. This proposition to give the Confederation this monopoly of making and selling all alcoholic spirits naturally has provoked a very general and warm discussion, especially on the part of the public press. In this canton, where there exists a very large distillery interest, the opposition was vigorous. Many church papers opposed it on moral grounds; that the Government should not make itself a party in a traffic so injurious to the people, and that if it be found necessary to restrict the sale of spirituous liquors, it should be done by the imposition of higher taxes, and that the portion assigned to the cantons to be used in measures to repress the abuse of alcohol is a recognition in a most distinct form of the baleful traffic. But the result of yesterday's popular vote shows that the law was most favorably considered by the people, receiving, as it did, almost two-thirds of the vote cast, and it is confidently predicted by its friends that no possible harm and much good will result. The distillers are required to sell their product to the Government, and to no one else. The Government will then resell it to the consumer—that is, the Government is to have a monopoly of the entire retail trade in intoxicants. This plan is not altogether new, having been tried in several countries, and notably in Russia at one time, where the imperial eagle was the sign over the door of the vodka shop.

It is expected that the retail price will be raised, and that 10,000,000 francs will be derived from it, to be disposed of as provided under the law. It is also contended that the quality will be improved, as strict regulations will be enforced in the materials used and methods of distillation. A recent writer on the question, a merchant in the wine trade in Zurich, says that even in this unsophisticated land of innocent-looking vineyards the grape takes the smallest part in the manufacture of wines. He makes the striking statement that the annual importation of dried raisins to Switzerland reaches 19,000 quintaux, while only 800 quintaux are used by confectioners and in households, the remainder being made into wine. This artificial wine is in great part mixed with the common red product of the southern French wines or with the acid native white wine. It is further estimated

that 12,000,000 francs' worth of this manufactured wine is sold annually in Switzerland, of which 5,000,000 francs' worth comes from France, the balance being prepared here. This writer asserts that it is impossible by means of any analysis to distinguish the manufactured from the natural wines. For some years the prevalence of intemperance, resulting, it is believed, from the free use, cheap production, and adulteration of alcoholic spirits has been observed by the thoughtful citizens of this country. An inquiry instituted by the Government disclosed the fact that there was consumed annually 150,000 hectoliters, or about 10 liters, of alcoholic liquors for each inhabitant. It will be interesting to temperance reformers to watch the effect of this experiment, which, in some of its features, is entirely new. It is perhaps the first effort ever made on a large scale to reduce the consumption of concentrated alcohol, while leaving that of diffused alcohol, as in wine and cider, untouched. The enactment of this law necessitated the modification of the customs duties convention between France and Switzerland, providing, in lieu of the abolishing of all cantonal and commissional duties heretofore imposed, a corresponding increase of the federal frontier customs duties, the details of which were given in a previous dispatch.

BOYD WINCHESTER.

LEGATION OF THE UNITED STATES,
Berne, May 16, 1887.

AGRICULTURE IN SCOTLAND.

The following table was compiled by Consul Underwood, of Glasgow, from Vol. XIX of the "Transactions of the Highland and Agricultural Society of Scotland." The returns were prepared in reply to the following set of questions:

(1) What was the quantity, per imperial acre, and quality of grain and straw, as compared with last year, of the following crops? The quantity of each crop to be stated in bushels. What quantity of seed is generally sown per acre?—(1) Wheat, (2) barley, (3) oats.

(2) Did the harvest begin at the usual time, or did it begin before or after the usual time; and if so, how long?

(3) What was the quantity, per imperial acre, and quality of the hay crop, as compared with last year, both as regards rye-grass and clover, respectively? The quantity to be stated in tons and hundredweights.

(4) Was the meadow-hay crop more or less productive than last year?

(5) What was the yield of the potato crop, per imperial acre, as compared with last year? The quantity to be stated in tons and hundredweights. Was there any disease, and if so, to what extent, and when did it commence? Were any new varieties planted, and with what result?

(6) What was the weight of the turnip crop, per imperial acre, and the quality, as compared with last year? The weight of the turnip crop to be stated in tons and hundredweights. Was more than one sowing required, and why?

(7) Were the crops injured by insects? State the kind of insects. Was the damage greater or less than usual?

(8) Were the crops injured by weeds? State the kinds of weeds. Was the damage greater or less than usual?

(9) Were the pastures during the season of average growth and quality with last year?

(10) How did stock thrive on them?

(11) Have cattle and sheep been free from disease?

(12) What was the quality of the clip of wool, and was it over or under the average?

Shires.	Wheat.			
	Quantity wheat.	Quality.	Quantity straw.	Seed sown.
	Bushels.		*Tons.*	*Bushels.*
Edinburghshire	44	Good	2	3
Linlithgowshire	35	Inferior	Average	3
Haddingtonshire:				
Lower district	48	Good	Good	3
Upper district	None			
Berwickshire	29		1¼	3
Roxburghshire	26	Inferior	Inferior	
Selkirkshire	None			
Peeblesshire	None			
Dumfriesshire (Upper Nithsdale)	None			
Stewartry of Kirkcudbright	29	Inferior		2½
Wigtownshire	30	Inferior		3
Ayrshire	34	Excellent	1½	3
Bute (only 10 acres wheat)	48	Good	Good	4
Arran	No wheat.			
Lanarkshire	No wheat grown			
Middle ward	36	Good		3
Lower ward	33	Good	Damaged by rain.	3
Renfrewshire:				
Middle ward	37	Good	Good	
Lower ward	No wheat.			
Argyleshire:				
Oban district	No wheat.			
Lockgilphead district	No wheat.			
Cowal district	No wheat.			
Inverary district	No wheat.			
Dumbartonshire	24½		Inferior	2½
Stirlingshire:				
Western district	No wheat.			
Eastern district	35	Injured		3
Fifeshire:				
Eastern district	38	Injured	1½	3
Middle district	30	Good	1½	3
Western district	30	Good, but damaged by rain.		3
Perthshire:				
Southwest district	26	Generally poor	Poor	3
Cupar-Angus district	40	Good		3½
Western district	No wheat.			
Strathearn district	32	Fair		3
Highland district	No wheat.			
Dunkeld and Stormonth districts	40	Good	Damaged by wet.	4
Forfarshire	32	Average		2½
Aberdeenshire:				
Buchan district	No wheat.			
Formartine district	No wheat.			
Garrioch district	No wheat.			
Shathbogie district	No wheat.			
Banffshire (lower district)	No wheat.			
Morayshire (lower district)	34	Good		3½
Nairnshire	No wheat.			
Invernesshire:				
Inverness district	30	Fair	Abundant	3
Beauly district	No wheat.			
Skye district	No wheat.			
Lochaber district	No wheat.			
Rossshire:				
Western district	No wheat.			
Dingwall and Munlochy districts	32 (Very little grown.)	Fine	Average	4
Mid-Ross, eastern Ross, and Cromarty districts.	36			
Sutherlandshire	No wheat.			
Caithnesshire	No wheat.			
Orkney	No wheat.			
Shetland (Lerwick district)	No wheat.			

NOTE.—No reports from Argyleshire (islands of Jslay, Iura, and Colonsay), Banffshire and Morayshire

Barley.				Oats.			
Quantity barley.	Quality.	Quantity straw.	Seed sown.	Quantity oats.	Quality.	Quantity straw.	Seed sown.
Bushels.		*Tons.*	*Bushels.*	*Bushels.*			*Bushels.*
42	Good		2½	64	Good		4
35	Inferior	Inferior	2½ to 3	30	Very poor	Very poor	5
48	Average	Average	2½	50	Good	Average	4
32	Good	Average	3½	34½	Good	Short	5
33	Inferior	Below av	2½	40	Good	2,400 pounds	4½
34	Inferior	Inferior		30	Damaged	Inferior	
25	Good (dam. by rain).	Average	3½	26	Good	Damaged	4½
33	Good (dam. by rain).	Damaged	3½	36	Good	Good	4
Very little grown				30			5½
31	Inferior			33½	Good; part dam. by rain	Inferior	
32	Poor		3½	32	Poor		4½
39	Excellent	1½		50½	Good		
30	Poor	Poor	4	37	Good	Good	5½
No barley				26	Average	Light	6
Scarcely any grown				32	Good; dam. by rain.	Inferior	5
32				38			
30	Very little grown			33	Inj. by rain		
32	Very little grown			40	Good	Heavy	
No barley				30	Inferior	Inferior	4½
Practically no barley				Average	Superior	Superior	5½
Very little barley				Average	Average		
No barley				47½		2½	6
No barley				25½		Inferior	6
Very little barley sown				38	Mostly good.	Good	3½
32	Inferior		3½	34	Injured	Inferior	4
36	Good	Injured	3	39	Injured	Injured	4
34	Injured	1	3	40	Injured	1	4
32	Excellent	1	3	35	Fair	¾	4½
36	Dam. by rain		3	40	Partly dam. by rain.		4
27	Inferior	Bad	4	Good crop.	Partly dam. by rain.	Dam. by rain	5
48	Fairly good.	Good	2½	50	Good	Inferior	4
No barley		Barley		Average			
36	Dam. by wet		3½	30	Dam. by wet		4½
27½	Good	Good	4	34			5
48		Inferior	3½	44		Dam. by wet	4
36	Variable		3½	44	Variable	Variable	4½
Average			3½	36	Inferior	Damaged	6
36	Variable		4	36	Fine	Abundant	6
38	Good	Good	4½	40	Good	Damaged	
40	Very little barley		3½	42	Dam. by wet	Variable	6
40				40			
38	Excellent		3½	48	Excellent		3½
30	Good		4	36			5
35			3½	32			4½
32	Good			40	Good		
No barley				18	Fair	Fair	6
No barley				30	Inferior		6
No barley				28	Fair	Good	6½
36	Superior	Fair	3½	36	Superior	Fair	4½
40				42			
36	Inferior	Fair		38	Good	Good	
32	Good		4	34	Good	Large	5½
Average crop				28	Good		6
Good average			3	Good av			3½

(upper district), and Shetland (island of Unst).

Shires.	Time of harvest.	Hay.		
		Quantity.	Quality.	Meadow hay.
Edinburghshire	Sept. 6	2 tons		None
Linlithgowshire	Late	1¼ tons	Fair	None
Haddingtonshire:				
Lower district	Aug. 17	2 to 2½ tons	Excellent	None
Upper district	Late	Average	Fair	Average
Berwickshire	Late	3,100 lbs	Good	None
Roxburghshire	Late	1½ tons	Good	Below av
Selkirkshire	2 weeks late.	1½ tons	Good	Inferior
Peeblesshire	Rather late.	1½ tons	Good	Good (dam. by rain).
Dumfriesshire (Upper Nithsdale)	2 weeks late.	25 cwts	Average	Below av
Stewartry of Kirkcudbright	10 days late.	22 cwts	Good	23 cwts. (below av.).
Wigtownshire	2 weeks late.	1 ton	Fair	Average
Ayrshire	10 days late.	1½ tons	Backward	Average
Bute	10 days late.	1½ tons	Average	Little grown
Arran	2 weeks late.	34 cwts	Good	None
Lanarkshire	12 days late.	34 cwts	Good	Good
Middle ward	2 weeks late.	37 cwts	Good	Excellent
Lower ward	3 weeks late.	38 cwts	Good	Average
Renfrewshire:				
Middle ward	2 weeks late.	2 tons	Good	Good
Lower ward	2 weeks late.	1 ton	Fair	Good
Argyleshire:				
Oban district	2 weeks late.	Light crop	Good	Inferior
Lochgilphead district	2 weeks late.	Good	Good	Average
Cowal district	Usual	Under av	Good	Inferior
Inverary district	Late	2 tons	Inferior	Inferior
Dumbartonshire	2 weeks late.	1½ tons	Good	
Sterlingshire:				
Western district	10 days late.	1½ tons	Fair	Inferior
Eastern district	10 days late.	1½ tons	Excellent	
Fifeshire:				
Eastern district	10 days late.	1½ tons	Good	Little grown
Middle district	2 weeks late.	1½ tons	Excellent	Good
Western district	2 weeks late.	1½ tons	Excellent	
Perthshire:				
Southwest district	2 weeks late.	18 cwts	Fair	Inferior
Cupar-Angus district	3 days late.	2 tons	Good	None
Western district	2 weeks late.			Inferior
Strathearn district	10 days late.	1½ tons	Good	Average
Highland district	10 days late.	18 cwts	Fair	Good
Dunkeld and Stormonth districts	Rather late.	1½ tons	Good	Average
Forfarshire	Usual	1½ tons	Good	Average
Aberdeenshire:				
Buchan district	1 week late.	1½ tons	Fair	Average
Formartine district	5 days late.	1½ tons	Fair	None
Garrioch district	3 weeks late.	1½ tons	Average	None
Shathbogie district	3 weeks late.	1 ton	Good	None
Banffshire (lower district)	10 days late.	18 cwts		None
Morayshire (lower district)	Rather late.	2½ tons	Good	None
Nairnshire	2 weeks late.	Average		None
Invernesshire:				
Inverness district	10 days late.	2 tons	Fair	Little
Beauly district	2 weeks late.	1 7/10 tons	Inferior	None
Skye district	2 weeks late.	Variable	Inferior	Inferior
Lochaber district	10 days late.	1½ tons	Good	Good
Rosshire:				
Western district	10 days late.	1 ton	Good	Good
Dingwall and Munlochy districts	10 days late.	1½ tons	Good	None
Mid-Ross, Eastern Ross, and Cromarty districts.	10 days late.	1½ tons	Light	None
Sutherlandshire	Average	Below av		Average
Caithnesshire	3 weeks late.	1½ tons	Inferior	
Orkney	Late	Good	Good	None
Shetland (Lerwick district)	2 weeks late.	Large	Good	Average

NOTE.—No reports from Argyleshire (islands of Isley, Jura, and Colonsay), Banffshire and Morayshire

Potatoes.			Turnips.		
Quantity.	Disease.	New kinds.	Quantity.	How sprouted.	More than one sowing.
Tons.			*Tons.*		
5½ to 6½	None	Magnum Bonum, Champion, Imperata.	30 to 35	Well	Some resowing.
Average	Very little		15 to 30	Well	Scarcely any.
7	None		24	Well	None.
5½	None	None	21	Well	None.
5	None		17	Well	None.
4	Very little	None	16½	Well	
4½	None	None	19	Well	None.
4	None		20	Well	None.
3½	Not much		19		
6	Some	Champions (diseased)	18½	Well	None.
6	Some	None	14	Well	None.
7	Some	Regents spoiled by disease	22½	Well	Very little.
6	Some	None	21½	Well	Little.
5½	Much	None	24	Well	None.
5	None	Few	35	Well	None.
10	None		25	Slowly	None.
6½	Some	Regents and Champions hurt by frost.	18	Well	None.
7½	Much	Magnum Bonums best	17½	Well	None.
5½	Some	Champions and Reading Heroes diseased.	16	Fair	Partly.
Average	Much	Champions affected	Average	Well	None.
Inferior	Little		Good av	Well	None.
Average	Little		24	Well	None.
Large crop	Very little	Mostly Champions	18	Slowly	Very little.
6½	S me	Champions diseased	18½	Well	None.
8	Little		Large crop	Well	None.
7	Much	Regents diseased	16	Well	None.
4½	Little	Beauty of Hebron sells well	15	Well	None.
5	None	None	16	Well	None.
4½	None		14	Well	None.
Average	None		20		Very little.
5½	Little		20	Well	Little.
6	Little		22	Well	Little.
4½	Little		25	Well	None.
6½	None	None	17	Well	None.
7	None	Magnum Bonum preferred	19	Well	None.
6½	Little		22	Fairly	A little.
6½			23		
6	None	Champions	18	Well	None.
7	None	Champions	22	Gen. well	Gen. none.
3			1		
5½			Half crop	Well	None.
5	None		18	Well	None.
6½	None		25	Well	None.
6	Very little		18	Fairly	None.
Good av	None		From 15 tons downward.	Well	None.
5½	None		21	Well	None.
7	None		9	Fairly	None.
5	None		28	Slowly	None.
7	Little		21	Well	None.
Average			Average	Well	None.
Fair crop			17	Slowly	None.
Good crop	None		Fair crop	Well	None.
Under av	None		Average	Well	None.

(upper district), and Shetland (island of Unst).

Shires.	Damage by insects.	Damage by weeds.	Condition of pastures.
Edinburghshire	Turnip-fly	None	Better
Lidlithgowshire	None	None	Average
Haddingtonshire:			
Lower district	None		Poor at first
Upper district	None	A few	Partly bare
Berwickshire	None	A few	Average
Roxburghshire	Very little	Very little	Good
Selkirkshire	None	Little	Bare
Peeblesshire	Little	Little	Good average
Dumfriesshire (Upper Withsdale)	Not much	As usual	Average
Stewartry of Kircudbright	None	None	Average
Wigtownshire	None	None	Inferior
Ayrshire	Little	None	Poor early in season; fine in autumn.
Bute (only 10 acres wheat)	None	Little	Good
Arran	None	None	Average
Lanarkshire	None	Much	Inferior; dry
Middle ward	Little		Good
Lower ward	Little	Little	Bad at first
Renfrewshire:			
Middle ward	None		Excellent
Lower ward	Damage by flies	As usual	Inferior
Argyleshire:			
Obaw district	None	Little	Average
Lochgilphead district	None	Little	Inferior
Cowal district	Little	Little	Inferior
Inverary district	Little	Usual	Inferior
Dumbartonshire	None	None	Average
Stirlingshire:			
Western district	None	Little	Average
Eastern district	None	None	Better
Fifeshire:			
Eastern district	None	None	Better
Middle district	None	Little	Good
Western district	None	None	Average
Perthshire:			
Southwest district	Little	Little	Good
Cuper-Angus district	None	None	Better
Western district	None		Inferior
Strathearn district	Little	None	Excellent
Highland district	None	None	Inferior
Dunkeld and Stormonth districts	None	Little	Better
Forfarshire	None	None	Fair
Aberdeenshire:			
Buchan district	Little	Little	Above average
Fomartine district	Little	None	Good
Garrioch district	None	None	Good
Shathbogie district	Little	Considerable	Poor
Banffshire (lower district)	None	None	Average
Morayshire (lower district)	None	Little	Average
Nairnshire	None	None	Average
Invernesshire:			
Inverness district	None	Little	Average
Beanly district	None	None	Good
Skye district	None	Considerable	Inferior
Lochaber district	None	Some	Average
Rosshire:			
Western district	None	A little	Bare
Dingwall and Munlochy districts	None	A little	Inferior
Mid-Ross, Eastern Ross, and Cromarty districts.	None	A little	Fair
Sutherlandshire	None	None	Fair
Caithnesshire	A little	A little	Fair
Orkney	None	None	Good
Shetland (Lerwick district)	None	Little	Excellent

NOTE.—No reports from Argyleshire (islands of Isley, Jura, and Colonsay), Banffshire and Morayshir

How stock throve.	Diseases.	Quantity and quality of wool.
Well	None	Average.
Not well	None	Average.
Well	None	Average clip of good quality.
Well	None	Below average.
Well	None	Short clip.
Sheep well; cattle not so well	Sheep free; some pleuro	Short clip; good.
Badly	A few cases of pleuro	Below average.
Well	None	Clip short; quality good.
Fairly well	None	Inferior.
Well	Some pleuro	Clip short, but good.
Fairly	None	Clip short, but good.
Well	A little pleuro	Below average.
Well	Braxy (fatal among sheep)	Inferior and below average.
Well	None	Inferior.
Fairly	None	Below average.
Well	None	
Well	Some pleuro	Average.
Well	None	
Fairly	None	
Fairly	None	Average.
Not so well	None	Short clip.
Fairly well	None	Below average.
Fairly	None	Inferior.
Well	None	Below average.
Fairly	One outbreak of pleuro	Below average.
Well	None	Average.
Well	None	Average.
Fairly	None	Average.
Fairly	None	Average.
Fairly	None	Below average.
Well	None	Average.
Not so well	None	Under average.
Well	Very little	Average.
Fairly	None	Short clip; good quality
Fairly	None	Below average.
Well	None	Good.
Well	A little pleuro	Average.
Well	A little pleuro	Average.
Well	Little	Below average.
Badly	None	Good.
Well	None	Average.
Well	None	Average.
Well	One case of pleuro	Short clip.
Well	Some cases of pleuro	Average.
Well	A few cases of pleuro	Above average.
Poorly	None	Short clip.
Well	None	Short clip.
Fairly	None	Rather short clip.
Poorly	None	Average.
Well	None	Average.
Well	One case of pleuro	Good quality; short clip.
Well	None	Average.
Well	None	Average.
Well	None	Good quality; short clip.

(upper district), and Shetland (island of Unst).

SUGAR-BEET IN DENMARK.

REPORT OF CONSUL RYDER.

Returns of the sugar-beet yield in 1886 from the different sugar-beet factories and district stations have now been placed before the public in a precise form.

That which has in great measure tended to influence favorably the yield of this product in 1886 is the circumstance of the young plants having been enabled to start up in the spring of the year in great abundance and with great uniformity. When this is the case and when the devastating attacks of insects and pests are avoided, it will take a great deal to produce evil results later on to this root crop, although it cannot be denied that the spring weather in this northern climate is always attended with considerable risks. The month of May is frequently so exceedingly dry that the seed cannot receive sufficient moisture for a favorable sprouting, and, for this season, it is a matter of primary importance in this climate to sow sugar-beets whilst there is still sufficient winter moisture in the soil to allow the seed to sprout even when rain is delayed. In 1886 the land was in especially good condition for sowing, and the months of April and May were favored with a good supply of steady falling rain, the rainfall in the driest summer months approaching somewhat to the normal.

A dry June is not so hurtful to the early-sown roots, especially in singling the young plants. Whilst the rainfall of June, 1886, in no place reached the normal, that of July was of a passably normal nature.

The month of August was, on the other hand, a period of severe trials for these roots, especially on the islands of Lolland and Moën, the rainfall having there measured only 16 and 23.6 millimeters against the normal rainfall of 60 millimeters.

The island of Fyen was more favorably situated in this respect, with 46.7 millimeters at Assens, and with 45.8 millimeters at Odense.

WEIGHING TESTS.

The results of the weekly weighing tests in the weeks from the 12th–14th August to the 9th–11th September were of the following nature:

Weighing test.	Nakskov.	Möen.	Assens.
	Centner.	*Centner.*	*Centner.*
First	160	200	.....
Second	177.2	213.5	243.3
Third	186.8	234	251
Fourth	225.7	274	304.8
Fifth	268	291	323

The growth is seen to stand in close relation with the amount of rainfall.

The month of September, with its high temperature and in spite of the small rainfall during the first half of the month, was exceedingly favorable to the roots. They grew well with the aid of the long nights, the heavy dews, and warm temperature, and the saccharine contents were found to be very high at the opening of the campaign.

It is, however, very probable that these roots, so far as Nakskoo was concerned, at the approach of harvest time did not come up to the normal, and had matured too abruptly; and that the rainfall during the last half of September and in October, which contributed to the very large increase in the centner yield per barrel of land, tended also to bring the quantitative value of the roots up to a more normal condition.

The island of Fyen was the part which throughout was absolutely favored with the most propitious summer weather for the normal development of the roots; and when this island has finally the lowest centner yield for barrel of land, this must undoubtedly be attributed in part to the poorer natural quality of the land, as also to a more sparing use of artificial manures, and altogether to a lower state of cultivation.

A comparison between the saccharine contents of the roots, from investigations made at the factories, with the centner yield per barrel of land, gives the result that no positive relation can be said to exist between the quantitative and the qualitative yields, but that a large centner yield and good quality (high manufacturing value) may for all that be united and reconcilable.

HENRY B. RYDER,
Consul.

UNITED STATES CONSULATE,
Copenhagen, April 20, 1887.

RAINFALL.

[In millimeters.]

Stations and factories.	Centner per barrel land.	April.	May.	June.	July.	August.	September.	October.	Together.
Nakskoo	340	35.1	29.8	34.6	71.7	21.1	65.3	44.1	301.4
Majbolle	295	38.7	29.7	38.4	84.3	19.8	57.8	47.2	315.9
Groshave	343	36.2	31.8	39.4	78.2	17.8	62.7	51.0	317.3
Stokke-Norke	271	31.5	29.3	40.8	51.2	10.5	52.8	52.0	268.1
Vesterborg	307	35.1	25.8	29.0	54.7	13.6	53.3	42.7	254.2
Horslunde	311	31.1	35.5	22.8	62.9	14.2	57.1	51.6	275.2
Nakskov factory	318.21	34.6	30.3	34.2	67.2	16.1	58.2	48.1	288.7
Stege	326	20.2	30.3	54.6	49.2	20.1	40.4	44.5	259.3
Dame	306	24.0	32.0	33.0	55.9	29.4	35.8	39.4	249.5
Damshotte	318	19.7	33.1	30.8	50.8	24.8	42.1	44.4	245.7
Pollerup	330	17.2	34.9	47.0	40.2	20.0	39.0	37.6	235.9
Stege factory	321	20.3	32.6	41.4	49.0	23.6	39.3	41.5	247.7
Assens	289	31.5	47.7	29.4	65.9	50.1	24.0	49.5	298.1
Uglebjerg	265	32.6	44.9	30.0	59.7	55.4	42.3	68.1	333.0
Salbrovad	279	16.2?	49.5	26.1	55.6	48.1	38.6	73.2	307.3
Haarby	250	34.3	45.4	27.1	62.5	33.1	33.7	52.1	288.2
Assens factory	274	28.6?	46.9	28.2	61.2	46.7	34.7	60.7	307.0
Odense	269	35.0	46.2	32.1	48.1	45.8	51.7	57.3	316.2
Hojbygaard	285.40	43.7	37.3	44.0	61.3	15.1	48.8	58.6	308.8

Normal rainfall, April–October: Maribo district, 378 millimeters; Odense-Svendborg districts, 375–400 millimeters.

COTTON AND COTTON-SPINNING IN JAPAN.

REPORT OF CONSUL JERNIGAN.

NATIVE COTTON.

The cotton plant is not a native of Japan. It was introduced from India by the votaries of the Buddhist religion, who, fleeing from persecution in their native land, sought in China and Japan the free exercise of their faith.

Cotton reached Japan nearly a century before it was received in China.

In A. D. 800 the seed was first sown in Japan, but at the close of the twelfth century the cultivation appears to have been abandoned, and it was not until the close of the sixteenth century that its cultivation was again commenced. It is recorded in Japanese history that during the latter date, and before the culture of the plant began to spread, one pound of yarn sold for $100.

The cotton grown in this consular district, in comparison with the plant in the Southern States, looks very small and unproductive. It does not appear to grow more than 18 inches high on an average. The leaves and bolls are small, and instead of the seed being sown in the center of the bed or ridge they are sowed on the outer edges, making two rows, where in the cotton States there is only one. The staple is not very good. It does not compare in firmness of texture with the cotton produced in the United States.

As soon as the cotton bolls or pods open they are plucked and, if the weather be favorable, are exposed to the sun to dry. If the weather is not favorable they are dried by artificial heat.

The lint is separated from the seed by means of rubbers, consisting of two small wooden rollers, which revolve in opposite directions and throw off the hard, smooth seeds. This leaves the lint full of knobs and impurities, and it has to be carded before it can be used even as lining.

The Japanese have a great deal to learn about the cultivation of cotton. They know this, and therefore will improve. The useful inventions of Jacquard and Arkwright are recognized and are being utilized.

AMOUNT OF PRODUCT.

According to the fifth annual report of the Imperial bureau of statistics for Japan, published in September, 1886, the following are the number of bales, weighing 400 pounds each, produced during the year named:

	Bales.
1878	297,396
1879	436,387
1880	296,296
1881	301,697
1882	287,785
1883	336,351
1884	336,598

Some of the Japanese cotton-farmers say that the statistics in the above table are not correct· that the number of bales of cotton actu-

ally made is underestimated. I have compared the statistics, giving the quantity produced in certain localities with the quantity actually made, and find that the opinion of the farmers is correct, and that the figures should be accepted as an approximation only.

It should not be understood that a cotton bale in Japan weighs 400 pounds. It is much smaller, and can easily be handled by one man. There is no symmetry about the shape of it. It resembles a large bag into which cotton has been closely pressed with the hands, and then ropes tightly tied around it.

The central and southern parts of Japan are better adapted to the growth and cultivation of cotton, but on account of the annually increasing importation of ginned cotton from China the lands under cotton in Japan have gradually become of less extent.

SPINNING-MILLS.

The amount of the yearly production, if compared with that imported from abroad, will not reach one-seventh of the annual importation of cotton yarn during the last ten years. There are now in successful operation in Japan 21 spinning-mills, with 74,120 spindles, and representing a capital of 2,000,000 yen (one yen is equal to about 78 cents in gold), and producing annually about 3,686,135 catties of yarn (one catty is equal to 1⅓ pounds).

The first inauguration of a cotton-spinning mill in Japan was that established at Kagoshima, by Prince Shimadzn, ex-daimio of the province of Satsuma, in 1868. This mill contained 6,000 spindles, and all the machinery was procured by the prince from England. Under the auspices and encouraged by the authorities other mills were soon afterwards erected, but at first this new industry was not seemingly successful. Recently, however, it has been developed and improved, and is now enabled to produce the material which meets with the requirements of the domestic customers. In the language of one of the leading native journals, "Our cotton-yarn spinners are now very busily and prosperously engaged in the production of this article, and no matter how much they produce of the article, they never find that their markets are glutted."

The mill that has attained the greatest degree of prosperity is located in this consular district, at Osaka. Its affairs are in so prosperous a condition that the capital invested was, a short time ago, increased to 600,000 yen ($486,000), new machinery of the latest pattern purchased, and a dividend at the rate of 18 per cent. per annum paid to the shareholders.

The second largest is the Hisoshima Spinning Company, with a capital of 201,420 yen ($163,150) and 500 spindles.

The third, the Nagoza Spinning Company, the capital amounting to 146,580 yen ($118,729) and number of spindles to 8,000. The smallest of the 21 cotton-mills is the Dojima, with a capital of 3,000 yen ($2,430) and with 3,000 spindles.

IMPORTS OF YARN.

The importation of cotton yarn has recently increased to some extent, still its annual importation amounts to about 20,000,000 catties (26,666,666 pounds), which is valued at no less than 5,000,000 yen ($4,050,000).

The total sum that has been paid to foreign countries by Japan in

purchasing cotton yarn since 1867 is estimated to be about 88,800,000 yen ($71,928,000). It is this immense outlay for a product that can be made and manufactured at home that is causing the Japanese to give more and careful attention to the planting, cultivating, and maturing of the cotton plant, and giving such a "boom" to the cotton-spining industry in this Empire.

The feeling of national pride, too, enters largely into the subject, for the Japanese are quick and sensitive, and love their island home and all that pertains to its honor and prosperity.

Nearly all the cotton yarn imported by Japan comes from Great Britain and the East Indies.

The following tables are compiled from the latest statistics I have, and show the importations for the year 1885 by Japan from the countries named:

Cotton yarn:	Catties.
Great Britain	12,131,200
East Indies	9,266,181
Printed cottons:	Yards.
Great Britain	3,271,892
France	35,669
Germany	36,948
Switzerland	119,969
Other countries	2,589
Cotton drills:	
Great Britain	1,202,906
United States	50,251
Other countries	12,091
Cotton satins:	
Great Britain	1,108,455
Germany	1,889
Other countries	7,460
Cotton velvets:	
Great Britain	2,027,458
France	1,307
Germany	248
Shirtings, gray:	
Great Britain	29,233,222
East Indies	3,200
Other countries	2,727
Shirtings, white:	
Great Britain	1,660,913
United States	55,332
Other countries	1,178
Shirtings, dyed:	
Great Britain	949,913
Holland	72,000
France	14,952

AMERICAN TRADE WITH JAPAN.

To the above taoles I would add that during the year 1885 Japan imported from China 4,398,471 catties of raw cotton.

The figures give to Great Britain the larger and controlling interest in the cotton trade of Japan, but India is now acquiring a great and decisive influence in directing this branch of trade, and has the advantage of Great Britain and other western countries in dealing with Japan, in the matter of currency, the productions of India being produced upon a silver basis, similar to that obtaining in Japan, while in Great Britain and the other countries everything is produced upon a gold basis, and all trade carried on upon such a basis.

The United States should share a larger proportion of this cotton

trade with Japan. A country that produces every year more than one-half of the whole world's annual consumption should not remain satisfied with selling to Japan only 100,000 yards of cotton cloth. If the other countries on which Japan draws so largely every year for her supply of this staple can make it profitable, why cannot the United States compete successfully with them? Our soil is fertile and better adapted to the growth of cotton than the soil of any other part of the globe. The fabric and texture of our cottons are better and finer than that manufactured anywhere else. Our machinery is cheaper and labor ample. Then, if the fault is not in our stars, it must be in ourselves. If the merchants and manufacturers of the United States desire to sell to Japan their cotton goods, I believe that they can do so as successfully and as profitably as the merchants of any other nation, if they will come to Japan, survey properly the business field, and study the peculiarities and wants of the Japanese. It is a mistake to suppose that such a result can be accomplished by merchants of ordinary business capacity. This class of merchants had better remain at home. They will not succeed in enlarging our trade relations, but the *bona fide* American merchant, with his simple, honest, and straightforward way of doing business, would be popular with the Japanese, and would succeed. In my annual report of December last, I stated that the Japanese preferred a better quality of goods more than the quality that sold so readily in their markets a few years ago. I now submit, in this connection, a few extracts from the views of the Tokio Chamber of Commerce, which have lately been made public:

The decline in the use of English gray shirtings by the Japanese people as compared with five or ten years ago is very easily explained. Careful examination shows that both the texture and wearing quality of those recently imported are bad, and deteriorating quality has finally brought the Japanese to view them with dislike.

* * * * * * *

There is no great falling off in the appearance of the gray shirtings now imported as compared with those which were imported in the years 1860, 1870, and 1880, but there is a most serious falling off in the texture and wearing quality. The present gray shirtings, when compared with those of previous years, are deficient in fineness of texture, are largely sized, do not last long, and quickly tear.

* * * * * * *

The texture should be fine, the wearing quality good, and price as moderate as possible.

* * * * * * *

It may be concluded that the Japanese would much prefer to purchase a good article at a reasonable price rather than a bad one at a low price.

The following table shows the average price of gray shirtings:

Quality.	1875.	1880.	1885.
Best quality, 8 widths, per piece of 38 yards	$3 65	$2 57	$3 02
Medium quality	2 47	2 45	2 15
Lowest quality	2 35	2 20	1 90
Best quality, per piece of 24 yards (T-cloths)	1 75	1 55	1 52

* * * * * * *

To make gray shirtings agreeable to the Japanese tastes it is absolutely necessary that the pieces should be woven in widths and lengths different from the present dimensions, of a width of 14½ inches and of a length of from 5 to 10 tan (a tan is a little over 10¼ yards English).

* * * * * * *

The price of gray shirtings at present imported is, as compared with Japanese moka, as 1 to 3, the ratio of the present market price being: gray shirtings 23 sen

per piece of about 11 yards in length and 14¼ inches in width; Japanese moka 75 sen per piece of the same dimensions. A comparison of the wearing qualities of the two shows that the ratio of difference is even greater than the price; *i. e.*, that moka has more than three times the wearing quality of gray shirtings; that if one year be taken as a limit of the wearing capacity of gray shirtings, that of moka will be three years or even three and a half years.

From the above extracts it appears that in the case of imported cotton fabrics cheapness should not be a paramount consideration and quality a matter of indifference, and this may be accepted as true in reference, generally, to all other arcticles of import. The Japanese are not parsimonious. Their own manufactures prove that they are not. Goods in Japan do not owe their popularity to cheapness at the expense of excellence, and the duability of an article is its first recommendation.

CONCLUSION.

The machinery used in the cotton-mills of Japan is, like the cotton fabrics, principally purchased from Great Britain. However, the Germans are now fast growing into popularity with the Japanese. In fact, they are already the favored race. Everything in Japan is becoming Germanized. Contracts for public buildings are awarded to the Germans. Army and navy discipline is borrowed from German regulations, and Germany's trade relations have, within the past few years, rapidly enlarged and increased in volume. All this may be owing to the fact that the new form of government for Japan, which is to go into operation in 1890, will be modeled after the form of the German Government, and the Japanese Parliament to assemble in 1890 will be like the German Reichstag. The wish to familiarize the Japanese people with the habits and customs of the German people may be cause of their special favoritism. But whatever the cause may be, I do not feel any alarm for the business safety of the English-speaking race.

The Government of Japan, like other Governments, will fill its orders in the best markets, and the United States can offer inducements as favorable as any other country possibly can.

There is a fair demand in Japan for railroad materials and machinery of almost every description for army and navy wants.

New lines of railroads are at present being projected and will annually be on the increase.

The army and navy are being reorganized and improved arms of every description introduced. Though the Japanese Government does control the railroads, though its supervision over public and private enterprises is exercised freely and with vigilance, this is no reason why our engineers, mechanics, and manufacturers should not supply Japan, in a larger degree, with all her needed materials.

If they wish to take at its ebb the tide of Japanese prosperity, they should be on the spot. Their genius, talent, and energy, illustrated by the grandest results, have only to be earnestly directed towards this part of the world to be attended with like success.

T. R. JERNIGAN,
Consul.

UNITED STATES CONSULATE,
Osaka and Hiogo, Japan, April 13, 1887.

THE UPPER YANGTZE STEAM NAVIGATION COMPANY.

REPORT OF MINISTER DENBY,

Section III of the Chefoo convention stated:

The British Government will further be free to send officers to reside at Chungking, to watch the conditions of British trade in Szechuan. British merchants will not be allowed to reside at Chungking, or to open establishments or warehouses there so long as no steamers have access to the port. When steamers have succeeded in ascending the river so far, further arrangements can be taken into consideration.

Chungking, situated on the Upper Yangtze River, and in the rich province of Szechuan, has long been one of the most important marts of trade of China and the principal one of the western part of the Empire. Baron von Richthofen estimated, in 1872, the grand total of all the export trade of the province of Szechuan considerably above 12,000,000 taels, and that of Chungking, which descended the Yangtze in 1871 in foreign bottoms, as unquestionably over 4,000,000 taels.

The British consular agents, who, under the provisions of the Chefoo convention, have resided at Chungking since 1877, have in their commercial reports estimated the annual value of foreign goods imported by junks to Chungking at $500,000.

The organization of "The Upper Yangtze Steam Navigation Company, London," for the purpose of constructing and running a steamer from Hankow to Chungking, is, in view of the undoubted value of the Chungking market to foreign trade, an undertaking which elicits the sympathy and interest of all mercantile classes in the far East.

The capital of the company is fixed at $50,000, divided into 100 shares, of $500 each, and has been already subscribed. It is proposed to build in Shanghai a powerful light-draught steamer, carrying about 200 tons dead weight and 150 passengers. It is computed that the net earnings of such a steamer will yield return at about $30,000 on the capital invested. As soon as this pioneer boat has demonstrated the practicability of steam navigation on the Upper Yangtze, the capital of the company will be increased and shares offered to the public.

The only difficulty which may present itself, after the question of navigating the upper river has been solved, is the position the Chinese Government will take. The possibility of this port being opened has caused no pleasure to the Chinese authorities, and their further action in the premises is looked for with some anxiety. When in 1885 the French plenipotentiary in China was negotiating at Tientsin the commercial treaty for Tongking, it is said that he endeavored to obtain the right for France conceded to Great Britain by the Chefoo convention, to send a commercial agent to Chungking, but the Chinese Government peremptorily refused. I have also heard it said that the concession contained in Section III of the Chefoo convention, quoted above, was only made by China under the impression that steam navigation on the Upper Yangtze was an utter impossibility.

I inclose a very able article on the subject of "the Upper Yangtze as a trade route," which was published in the London Times, and

which I do not believe to be an over-colored picture of the importance of this trade to western nations.

CHARLES DENBY.

LEGATION OF THE UNITED STATES,
Peking, April 27, 1887.

[Weekly London Times, March 4, 1887.]

THE UPPER YANGTZE AS A TRADE ROUTE.

In the Times of January 18 appeared a communication on new markets for trade in China, in which chambers of commerce in this country were urged to give up for the present any attempts to open Tibet and to turn their attention to other parts of the Chinese Empire, where success was more likely to attend their efforts. It was argued that at the present time it was not expedient to continue worrying the Chinese about Tibet, seeing that the convention in which we promise to give them time for inquiry has not yet been ratified, while no such objections existed to endeavoring to get the Canton River opened to trade as far as Nan-ning, and the Yangtze as far as the wealthy and populous town of Chungking, in Szechuan, 1,400 miles from the sea and 400 miles beyond Ichang, the highest port at present open by treaty on the river. The Chefoo convention provided that the port of Chungking was not to be opened to foreign trade until a steamer had ascended the river to the place; but whenever a steamer succeeded in reaching the port the Chinese promised to take into consideration the regulations under which it was to be opened to trade. The reason for this guarded arrangement was that it was doubtful whether the rapids in the river above Ichang, in what are known as the Ichang gorges, were navigable. Our knowledge of the Upper Yangtze in 1877 was comparatively small, few travelers having thoroughly examined the higher reaches since Captain Blakiston's journey of twenty-five years ago. Writing in 1882, Sir Thomas Wade, the British negotiator of the convention, explained the "peculiar conditions" under which Chungking was opened:

"Our merchants were not to reside there until steamers should have ascended the river. My object in suggesting or acceding to this arrangement was to admit of the establishment of a regular customs staff before a British community should be invited to fix its residence at Chungking. No steamer has yet attempted the ascent of the river above what are known as the Ichang gorges, the most enterprising having been deterred, as I have reason to think, by the suspicion that the rapids, which succeed each other at long intervals for about 100 miles above Ichang, present an insurmountable difficulty."

It is as true now as it was in 1882 that "no steamer has yet attempted the ascent of the river," but the reproach, for reproach it undoubtedly is, to the enterprise of British merchants in China is about to be removed. Since 1878 various energetic consular officers have resided at Chungking under the provisions of the Chefoo convention; they have investigated the neighboring regions, and have traveled up and down the Yangtze rapids in all seasons of the year. In this way a precise knowledge of the difficulties of the navigation has been obtained, and also a more accurate estimate of the prize to be gained in surmounting them. Mr. Baber, who was the first British official to reside at Chungking, and who was there for four years, made light of the obstacles presented by the rapids. Mr. Spence, his successor, who wrote a special memorandum in 1882 on the subject, said that merchants formed an excessive estimate of the dangers and difficulties of the passage of the rapids:

"I have been up and down them in Chinese junks at all seasons of the year—in the height of the summer freshet and at the lowest winter level—and I am firmly convinced of their practicability for small, handy, light-draught, full-powered steamers during nine months of the year without the aid of more than the ordinary methods of steam navigation. During the remaining three months the ordinary methods would require reinforcement. The effect of the summer floods is not to increase the difficulties of the rapids, but to obliterate them altogether, and the only season when, in my opinion, there would be any obstacle at all is the time of lowest water in the first quarter of the year."

Finally, Mr. Hosie, the last consular agent but one at Chungking, writes in the same strain. Only one rapid, in the proper signification of the word, exists, but it is navigated by Chinese junks:

"If a boat drawing 4 feet can be dragged over by a hundred men and boys, half of whom merely shout and leave the pulling to the other half, what is there to prevent a steamer of special construction, of equal draught, and with a steam-power exceeding the strength of half a hundred men and boys, from ascending?"

These strong opinions from a succession of consular officials who were in the best position to form correct estimates of the real difficulties of the navigation were all unheeded; no merchant or chamber of commerce made an effort to solve this question of such great importance to our trade with China—a circumstance it is well to note in view of the recent complaints against British consuls of apathy. On this occasion all the energy was that of the consuls; the apathy was on the part of the merchants. Ultimately, Mr. Archibald Little, a merchant, settled at Ichang, who was interested in Yangtze navigation, went up the river into Szechuan, and examined the rapids for himself, as well as the markets beyond. Like Messrs. Baber, Spence, and Hosie, he came to the conclusion that the difficulties were greatly exaggerated, and that the river was quite navigable for steamers constructed for river navigation. The main point in the construction is to minimize the hold of the current on the vessel; hence it should be flat-bottomed and should have a small draught of water. With a view to obtaining assistance from those interested in the trade with China to construct a pioneer steamer, Mr. Little has come to England, and has, happily, been quite successful in his mission. The sum required was a small one (only £10,000), and it is not clear why the chambers of commerce and merchants in China did not make it up among themselves. In this country the chambers of commerce were very glad to hear Mr. Little lecture on the interesting region beyond the gorges; they thanked him for his discourse, as well they might, but gave him little assistance towards opening the region in question to British trade. In spite of the apathy of those principally interested, the required funds have been obtained; the engines for the pioneer steamer will be constructed by a firm especially experienced in the machinery required for river navigation, and the vessel will then be built in Shanghai. Mr. Little himself will accompany the vessel on her first journey, which it is to be hoped will prove successful.

The importance to British trade in general of the first trip of this steamer up the Ichang gorges can be demonstrated in a few words. In the first place, when Chungking is opened it becomes subject to the ordinary regulations affecting treaty ports, and consequently foreign merchandise will be freed from all inland transit dues, which, when a transit pass is taken out at the port of entry, is nominally 2½ per cent. At present one of the greatest transit barriers in China is situated at Kweichow Fu, on the Yangtze, below Chungking. British manufactures could be laid down in Chungking, 1,400 miles from the sea, and a great center for trade with Szechuan, Yunnan, Tibet, and other places, for the same duty they pay at Shanghai. This considerable reduction in the price of our goods in the far interior of China is the first benefit which will follow the successful voyage of the pioneer steamer. Then Szechuan, for which the Yangtze is practically the only outlet, is one of the wealthiest and most populous provinces in China. Its situation has saved it from the devastation which recent rebellions have brought upon other provinces; the soil is fertile, growing two crops a year, of which the poppy is one, while the land tax, which was, for historical reasons, originally low, is only levied on one crop. The population, therefore, is able to buy, and seven or eight years ago imported by junks up the river foreign goods to the estimated value of £700,000. Now, as in addition to the transit dues this trade is burdened with enormous charges for carriage, it can be readily understood that under more favorable conditions it is capable of great expansion. The freight up the river to Chungking is about 70*s.* per ton and 14*s.* down, all risk of loss on the rapids being borne by the shipper. Even with these drawbacks the present traffic up the river is estimated at 10,000 tons a month up the stream and the like amount down. The population of Szechuan alone is 80,000,000. Mr. Spence, in the report quoted above, speaks of the "rare productive capacity" of the province, and of "the abounding prosperity of its people." He goes on to say that the stimulus the opening of Chungking would give to the consumption of British manufactures, not to say to foreign enterprise in general, is obvious, and none appreciate this better than the Chinese importing firms in the town. Beyond Chungking, Mr. Spence adds, "we shall find to the north, northwest, and west hundreds of miles of great waters, whose navigation by steamers will be sought for by the Chinese themselves once they have seen steamers come up the great river from Ichang. And everywhere, in Eastern Szechuan, at least, we shall find a large population of active, industrious, well-to-do people, able to buy and having much to sell," as appears from the fact that Szechuan exports to the eastward to the amount of nearly ten millions sterling per annum. These statements respecting this great province are not those of an enterprising and fanciful promoter, but of sober consular officials who have been specially sent up the Yang-

tze to investigate the strict facts and to report them. Hence Mr. Little's expedition will be watched with great interest; if his bark does not carry Cæsar and his fortunes, it carries a large part of the fortunes of the British trade of the future with one of the largest and wealthiest of the unopened markets of the world.

CHINESE RAILWAY COMPANY.

REPORT OF MINISTER DENBY.

I inclose a prospectus issued on the 12th instant by the newly-organized "Chinese Railway Company."

The railroad in contemplation is an extension of the Kaiping Railway, which has been in operation for some years.

In its prospectus the company, to dispel doubts "existing in the public mind as to the ability of the Kaiping Railway to make substantial profits," gives a few figures to show that there remains a balance over and above the working expenses of the road sufficient to pay a dividend of from "five or six to, if all goes as well as expected, 10 per cent."

The company now desires to increase the capital by 1,000,000 taels, and this sum it is proposed to raise by issuing 10,000 shares of 100 taels per share.

The following assurance given to would-be shareholders is highly suggestive:

In the administration of affairs this company will adhere strictly to economy and efficiency, untrammeled by official direction, and by not allowing foreign merchants to squander the capital; but the chief aim will be the establishment of an administrative system free from faults and beneficial to the company, a system that will not relax into remissness nor allow the company to exist only in name, as some companies in China have done.

CHARLES DENBY.

LEGATION OF THE UNITED STATES,
Peking, April 19, 1887.

[The Chinese Times, April 16, 1887.]

PROSPECTUS OF THE CHINESE RAILWAY COMPANY.

In the year 1886 the Kaiping Railway Company undertook the construction of a railway from Hsû Ko Chuang, at T'ang Shan, to Yen Chuang, on the river Chi, and for this purpose they raised a capital of 250,000 taels by issuing 2,500 shares of 100 Tientsin taels each. The total length of the new railway, in connection with the one previously constructed, is 90 li, and the work, when completed, was pronounced most successful. Recently the board of admiralty submitted a memorial to the Throne, proposing the construction of a railway from Yen Chuang to Lu T'ai, Peitang, and the north shore of Taku to Tientsin and other places, the total length of the contemplated railway being about 80 li, in order to facilitate the transport of troops and war material, and for the convenience and benefit of the mercantile classes. It was also proposed to place the construction and management of the new line in the hands of this company. This memorial received the sanction of Her Imperial Majesty the Empress, and the matter has been placed on record. On account of the doubts existing in the public mind as to the ability of the Kaiping Railway to make substantial profits, the following statement, showing the working returns of the existing railway between Yen Chuang and Kaiping, is subjoined: From the transportation of coal, the annual freightage can be guaranteed not to fall short of 30,000 taels; from limestone and sundry merchandise the annual freightage will be

from 10,000 taels to 20,000 taels; from passenger traffic, over 10,000 taels. Deducting 20,000 taels or 30,000 taels from the above earnings for expenses, working, and maintaining the railway, there remains a balance sufficient to pay a dividend of from 5 or 6 to, if all goes as well as expected, 10 per cent. If the line is extended to Taku and Tientsin, it will pass through various salterns, towns, villages, and landing places of the steamers, from all of which it will be easy to obtain considerable and adequate freight, and the profit derivable therefrom cannot possibly fall below that obtained at the Yen Chuang Kaiping section of the road. Therefore no one need doubt the ability of the entire line to pay an annual dividend of from 5 or 6, or even, when traffic is developed, 10 per cent. The company now desires to increase the capital by 1,000,000 taels, and this sum it is proposed to raise by issuing 10,000 shares of 100 taels per share. A set of regulations, which are appended below, have been prepared. In the administration of affairs this company will adhere strictly to economy and efficiency, untrammeled by official direction, and by not allowing foreign merchants to squander the capital; but the chief aim will be the establishment of an administrative system free from faults and beneficial to the company, a system that will not relax into remissness nor allow the company to exist only in name, as some companies in China have done. If any gentlemen should desire to become shareholders, they are requested to send their names and addresses, together with the number of shares they wish to subscribe, to the company's head office at Tientsin for registration, and the share money should be deposited with the Hong-Kong and Shanghai Bank at Tientsin, in return for which the company's share certificate and pass-book will be given. Those friends residing in other ports who wish to subscribe for shares are invited to call at the Hong-Kong and Shanghai Bank offices in their respective ports, and having registered their application for shares will deposit the money with the bank and receive provisional receipts until such time as the company is able to issue regular share certificates, when the bank receipts must be given up for cancellation. Although the capital that is now subscribed is intended for the construction of the Yen Chuang Taku Railway, yet should the line be hereafter extended, any money on hand will be used for such extension, consideration being taken according to the respective priority of the shareholders, those having entered their shares first being entitled to such preference as may justly be due. As this company is formed on an upright and trustworthy basis, and will never fail to act up to its principles, it is to be hoped that gentlemen wishing to become shareholders will not hesitate or delay.

The following regulations, enacted by the Kaiping Railway Company, are herewith appended:

(1) "It is proposed in the memorial of the board of admiralty to the Throne, approved by imperial decree, that this company should be entrusted with the construction of a railway from Yen Chuang to Lu T'ai, Peitang, Taku, Tientsin, and other places, the whole length of the railway being 180 li. The company, in order to obtain the necessary capital of 1,000,000 taels for purchasing land and materials for erecting stations, building bridges, &c., now propose to raise the sum required by issuing 10,000 shares at 100 taels per share, and those who are already shareholders and others from the official and mercantile classes are now at liberty to subscribe for any number of shares required.

(2) "This company has been called the Kaiping Railway Company because the original line was built at Kaiping in T'angshan, but since the line is to be extended to Taku and Tientsin, it will necessarily pass through many towns and places, and the name of Kaiping as applied to the company will be no longer appropriate. It is proposed, therefore, that, following the custom of the Chinese Merchants' Steam Navigation Company and the Imperial Telegraph Company, the Kaiping Railway Company shall hereafter be designated as *The Chinese Railway Company*.

(3) "The capital that is now being raised shall be added to the 250,000 taels subscribed last year, and the entire funds shall be used for the company's purposes.

The earnings of the company shall be divided pro rata among the shareholders according to the number of their shares; but as the old shareholders paid for their shares last year, they are entitled to due consideration when the first dividend of the company is paid, so that justice be done.

(4) "Whenever the company have to purchase rails or other materials, they will notify the different mercant le firms to hand in tenders for the same, and the tender that offers the best article at the lowest price shall be accepted. In this way economy will be secured. As to the workmen to be employed, the company will engage those that built the line at T'ang-shan, also the villagers dwelling in the vicinity; thereby obtaining men of experience and conciliating the people at the same time.

(5) "According to the memorial of the board of admiralty, Shên Pao-ching, ex-financial commissioner of Fuhkien, and Chou Yü-shan, acting commissioner of the

Salt Gabelle and ex-superintendent of maritime customs at Tientsin, have been appointed directors of the company, and these high officials are to be vested with powers pertaining to the maintenance and protection of the company's railways. In all cases where the company meets with difficulty, or in dealings with local authorities, these high officials are to assume responsibility. Wu Ting-fang, expectant taotai, and Wu Nan Kao, expectant prefect, manager and assistant manager respectively of the Kaiping Railway Company, are hereby appointed manager and assistant manager of this company. The company will conduct all its affairs upon true business principles, neither carrying on its correspondence officially nor accepting any official seals; neither engaging wei-yuans, nor employing runners. In all matters requiring consultation, the board of directors shall first be convoked for deliberation, and when a decision has been made will report same to the head directors. The officers of the company will never take action without having first submitted it to the deliberation and approval of the board of directors. The officials will not take advantage of the merchants, nor will the merchants impose upon the officials; therefore intending shareholders may feel assured.

(6) "In all matters pertaining to the appointment of managers, the election of a board of directors, the engagement of superintendents and other employés, the management of finances, the payment of dividends, the resale of shares, and all other matters, the company will conform to the general laws and regulations of corporations in western countries. Articles 5th, 6th, 7th, 8th, 9th, 10th 11th, 12th, 13th, 14th, 15th, &c., in the regulations of the Kaiping Railway Company shall be adopted, and whatever has not been provided for in the above articles shall be supplied from the laws of railway corporations in western countries, selecting such as are beneficial to the company, and adapted to the circumstances of China.

(7) "After twelve months from date of commencing operations, the company's treasurer shall draw up a detailed statement of expenditures and receipts, and shall submit copies of the same to all the shareholders. A date will also be fixed when the head directors, managers, board of directors, and shareholders shall be convoked to jointly deliberate on the company's affairs, and to examine the accounts submitted, and to decide upon the dividend to be paid. Afterwards a meeting for ends similar to the above shall be convened yearly."

FOREIGN TRADE OF CHINA IN 1886.

REPORT OF MINISTER DENBY.

Although the value of trade in 1886 has been greater than any previously recorded, being 164,685,800 taels,* it is said that business has not been in all departments advantageous to the producer or the merchant. Overproduction and overcompetition, as well among the foreign firms as among the Chinese, seem to be the chief causes of this state of things.

The shipping statistics show an increase of 5,804 vessels, aggregating 3,687,589 tons, over the preceding year. The total number of vessels which entered and cleared the customs in 1886 was 28,244, with an aggregate tonnage of 21,955,760 tons. In 1885, 18,807 vessels of 11,983,591 tons burden entered and cleared at the treaty ports. This was the first year that the customs published a general table of the foreign shipping at the treaty ports.

The customs revenue for 1886 were 15,144,678 taels, an increase of 671,912 taels over the preceding year.

EXPORTS.

The export of tea during the year under review was the greatest in quantity for the last ten years, being 2,217,295.43 piculs, but we are told that "probably the growers of tea and the ocean carriers are

* Haikwan tael—$1.22 U. S. gold.

the only ones who have been benefited by the exceptionally large operations of the year unless we include also the Government, which gets a revenue proportional to the amount of the export."

The exports of silk in different forms has been on a much larger scale than in former years, its estimated value being for 1886 about 28,800,000 taels.

The export of sugar has considerably fallen off in the last few years, being 612,476 piculs in 1886, 827,236 piculs in 1885, and 1,571,105 piculs in 1884. The decline is ascribed by the customs "to the imposition of new taxation in Formosa; the competition of other sugars, especially Javas, the influence of protection given to sugar cultivation in other countries, and the drought prevalent in the southern sugar-producing provinces.

IMPORTS.

The total value of the import of foreign goods from foreign countries in 1886 was 89,499,323 Haikwan taels against 88,200,015 Haikwan taels in 1885 and 72,760,758 Haikwan taels in 1884. Last year's imports show a falling off in the value of opium, cotton goods, miscellaneous piece goods, and metals, and an increase in the value of imports in woolen goods and sundries of 3,441,332 taels.

An interesting fact is disclosed by the official table giving the total importation of opium into Hong-Kong and its excess over the entries at the treaty ports, by which we learn that the value of this excess (which may, roughly speaking, be taken as the value of the smuggling trade in opium with China) was 9,337,166 taels in 1886.

The import of kerosene in 1886 was 22,800,000; in 1885, 14,700,000; in 1884, 7,000,000. While we find that the consumption of kerosene at the northern ports is less than it was in 1885, that in nearly all the southern ports has increased greatly, being 2,600,000 gallons, whereas it was only 1,800,000 in 1885. "This gain, however," the report tells us, "does not represent increased consumption, the stocks at Shanghai at the end of 1886 being 10,500,000 gallons."

Looking at the trade of the United States with China during the last year, we find that its value was 14,333,024 taels, being an increase of 2,719,906 taels over that of 1885. The following table, showing the steady increase of our trade with China during the last eleven years, may be of interest:

Year.	Exports from China to United States.	Exports to United States from China.
	Taels.	*Taels.*
1876	7,259,018	788,598
1877	7,951,308	1,188,186
1878	6,576,125	2,263,48
1879	8,966,698	2,540,763
1 80	8,106,917	1,204,595
1881	10,222,335	3,300,312
1882	8,420,180	3,276,728
1883	7,351,961	2,708,395
1884	8,279,598	2,418,367
1885	8,297,722	3,315,402
1886	9,685,691	4,647,333

In regard to our shipping interests in China during the last year we find that 413 American ships entered and cleared at the treaty

ports, a falling off of 180 over 1883. In 1886, 16,193 British vessels entered and cleared at the treaty ports. While Great Britain had 75.28 per cent. of the foreign carrying-trade with China, Germany 5.55 per cent., France 7.30 per cent., we had 0.91 per cent. It is also worthy of note that in 1886 no American steamer visited Shanghai.

As above mentioned, the low rates of exchange have exercised a great influence on the trade of last year, encouraging the trade of silks and occasioning heavy losses to those engaged in the tea business; "it has been," remarks the writer of the report, "an element which has affected many departments of foreign trade during the year to an extent only less grave than war itself would have been. The course of exchange during 1886 was lower even than in 1885." Thus the Shanghai tael exchange on London, which was 4.11¼ in January, 1885, was 4.7⅞ during the same month of 1886, and in August, 1886, it fell to 4.3⅝, the lowest rate being 4.3½ on the 19th August.

CHARLES DENBY

LEGATION OF THE UNITED STATES,
Peking, May 17, 1887.

MINOR INDUSTRIES OF HONG-KONG.

REPORT OF CONSUL WITHERS

WORKING IN BRASS AND COPPER.

The Chinese are quite expert in the manufacture of various articles for use and ornament, from brass, copper, and yellow metal. The importation of late years of yellow-metal sheathing has been a great advantage to the Chinese braziers, who use quantities for the manufacture of a great variety of implements, such as pots, pans, cymbals, gongs, &c., which previously were made by the more laborious and expensive method of casting. The manufacture of what are commonly known as hubble-bubble pipes is carried on quite extensively here, some of the establishments furnishing employment to something like a hundred operatives. These pipes, as a rule, are made from yellow-metal sheathing, cut with shears into proper shape and size, and the component pieces brazed together. The workman sits on a low stool, before a narrow, wooden trestle or bench, about 3 feet long, having at one end two iron staples or rings projecting above the surface, with another flat staple near the center. All the tools used by the workman have a piece of wood or bamboo, about 2 feet long, affixed to one end, and this passes through the rings or staples mentioned, the handle of the file, shears, or rasp being held by the workman. This arrangement enables the operator to work the tool more steadily, and by exerting more pressure or applying more force, the work of filing or scraping is much expedited. With the shears the workman first cuts the metal from the sheets in proper form, then fashions it by hammering with a convex-faced hammer upon a block of wood, annealing it from time to time by heating in a charcoal furnace and cooling by immersion in water, by which process the metal is rendered softer and tougher. The stem is made by putting a piece of metal, of suitable shape, on a small

anvil, with a concavity on its face, and, with a properly-shaped tool, hammering it until the brass has assumed the same shape. All the parts are then adjusted, wired together, and brazed. It is then scraped and polished. The rough polishing is done by placing in the flat staple a piece of wood, shaped to fit the inside of the pipe, and on this the pipe is placed, and being thus firmly held, the workman, with a suitable tool, cuts away all the inequalities of surface, then files it smooth, and polishes with fine sand, finishing off with a finely-powdered or levigated silicious ash, obtained by burning rice husks.

Gongs and cymbals are made from this sheathing by hammering, the resonance of the instrument being of a higher quality in proportion to the amount of hammering received. Pots and pans are also hammered into proper shape, and a rounded and thickened edge given them by folding the edge over a wire and then soldering it.

MANUFACTURE OF BOOTS AND SHOES.

The use of leather in the manufacture of boots and shoes has of late years largely increased, and the shoe industry has now attained considerable proportions. Not only is the demand for local consumption supplied, but large numbers are made for export to different parts of the world. Shoes are sent to Australia, the Straits Settlements, Saigon, Haiphong, Vancouver's, San Francisco, Panama, and South America.

The principal peculiarity of these shoes is found in the great thickness of the sole. This sole is made either of felt or leather, which, after being first cut into proper shape, is pressed by a simple arrangement. In a piece of hard wood 5 feet long and about 15 inches in diameter, a mortise is cut 5 inches wide and 3 feet long, leaving about a foot of solid timber at each end. The soles are placed in this mortise, and between each is placed a thin piece of plank. Wedges are then driven in at the top until the compression is deemed sufficient. They are then removed from the press and the layers sewed or pegged together.

Leather of Chinese manufacture is preferred, being softer and more porous than that of European or American production. If kept oiled or greased it is very durable, but if blacked in the usual way cracks and breaks badly.

PRESERVING.

Though most of the preserved ginger sold in this market is made in Canton, a considerable quantity, which is steadily increasing, is now prepared in this colony. The process is simple. After first boiling the fresh root until it becomes soft, it is punctured all over with a fork and then boiled in sirup until the proper consistence is obtained, when it is placed in jars for market. Other fruit and vegetables are preserved in substantially the same manner, holes being pricked into them to allow the sirup in which they are boiled to penetrate them in every part.

A favorite preserve is made of small oranges. It is called *cumquat*. The fruit is preserved whole, after being scraped all over to free the essential oil from its containing vesicles. It is then punctured and boiled. Young bamboo shoots are largely preserved, as are snap-beans, tomatoes, and most of the vegetable roots.

GLASS MAKING.

The Chinese in Hong-Kong manage to turn out a considerable quantity of glassware of various kinds and of fair quality, with the minimum of implements and a plant the most inexpensive. True, the material in general use is old glass remelted, for which expensive furnaces and apparatus are not indispensable. The crucibles used are small, rarely exceeding in capacity 200 pounds. These are set in a furnace stoked from a small opening in the side. About 3 cwt. of coal is used in melting one crucible of glass. The tubes by which the molten glass is collected from the pot, are perceptibly lighter and shorter than those used in America. After being blown, the glass is annealed in a small square pit containing ashes and straw, the latter being speedily converted into ash by contact with the heated glass. The molds used are made of clay and are often very ingeniously devised to meet the varying indications required. When taken from the crucible the operator does not marver the lump of molten glass by rolling on a flat iron slab as is usually done. They have, in fact, no marver's tools or other appliances usually seen in glass-blowing establishments.

A small trowel-shaped tool of iron, clay molds, and a few iron tubes constitute the Chinese glass-blower's whole stock in trade.

The above relates to Chinese glass-blowers alone, of whom there are many in the colony, but there is a large plant for the manufacture of glass, owned by English and foreigners, in Hong-Kong, which has all the modern appliances, but is not now at work.

R. E. WITHERS.

UNITED STATES CONSULATE,
Hong-Kong, April 25, 1887.

IMMIGRATION INTO SOUTHERN BRAZIL.

REPORT OF CONSUL LETCHER.

The province of Rio Grande do Sul, which is the most southern in Brazil, has an area of 118,755 square miles; and is bounded on the west and south by the Argentine Republic and Uruguay or the Banda Oriental, and on the east by the Atlantic Ocean. Although the most southerly, and consequently the most habitable portion of the Empire—owing to its entire freedom from yellow fever, and the scarcity of visits from that other great scourage, cholera—the population in 1886 was estimated at only 899,100. Of these, 30,000 were slaves and 200,000 foreigners. The foreign element is furnished almost wholly by Europe. In the new colonies to the north, northeast, and northwest of Porto Alegre (the capital of the province) there are said to be over 95,000 Germans. Porto Alegre can be called a German city, as out of its population of 40,000, fully 75 per cent. are of German origin, and speak their mother tongue, almost to the exclusion of the official language of the country, Portuguese. Since Germany passed stringent laws in regard to immigration of its citizens to Brazil and this Government ceased to offer as great inducements as in former years, Italy and Portugal have taken the lead in populating all the provinces of the Empire.

The following tables give the number of immigrants arriving at Rio Janeiro during the years 1882, 1883, 1884, and 1885, their nationality, and their distribution among the different provinces:

Nationality.	1885.	1884.	1883.	1882.
Italians	10,908	5,933	10,698	10,562
Portuguese	7,611	8,683	11,286	9,269
Germans	2,119	1,240	1,600	1,588
Spaniards	815	576	2,343	3,738
Austrians	466	598	249	57
Poles	251	359	.....	.....
French	233	155	152	249
English	90	100	158	239
Swiss	43	70	94	30
Turks	43	.....	.....	.....
North Americans	25	.....	.....	.....
Argentines	24	.....	.....	.....
Russians	24	98	10	19
Swedes	16	.....	.....	.....
Belgians	16	.....	.....	.....
Orientals	4	90	11	10
Other nationalities	30	97	98	134
Totals	22,727	17,999	26,789	25,845

Provinces.	1885.	1884.	1883.	1882.
Sao Paulo	5,163	4,427	5,118	9,718
Rio Grande do Sul	4,643	1,985	4,402	3,549
Minas Geraes	1,434	1,202	987	1,450
Santa Catharina	1,308	6,611	1,595	539
Rio de Janeiro	1,006	875	717	4,223
Parana	429	386	419	383
Espirito Santo	167	33	342	221
Pernambuco	53	10	22	24
Para	26	21	26	22
Bahia	23	11	103	36
Amazonas	19	27	2	.....
Alagoas	.....	11	2	.....
Parahyba	.....	.....	2	10
Maranhão	.....	.....	.....	4
City Rio Janeiro	8,456	2,401	13,052	5,721
Total	22,727	17,999	26,789	25,845

In 1886 this province received 3,524 emigrants—2,527 Italians, 761 Germans, 92 Portuguese, and 144 of other nationalities. Of these, 3,060 settled in the colonies in the north of the province, and 464 in the cities and towns.

INDUCEMENTS TO EMIGRANTS.

As an incentive to immigration, the Brazilian Government holds out or offers to emigrants the following inducements:

(1) Payment in full of their passage from Europe to Brazil to all those proceeding to agricultural settlements as laborers, with or without their services having been previously contracted for. The payment of same will only be made after the emigrant is located on establishments of that nature and of which the proprietors, previous to the departure of the emigrants from Europe, have obtained from the Government the authorization to cause them to come.

(2) Reduced rates of passage to all those who may wish to settle on their own account on lands belonging to the state, which will be sold to them, already measured and marked out, for cash or for payment at stipulated times; or to those preferring to establish themselves in the already existing agricultural colonies. The payment

of reduced rates will take place as soon as arrangements are made with the transatlantic steamship companies to that effect, and who will then only be able to charge the emigrants the reduced rate fixed for their passage.

(3) The construction of roads, schools, and churches, as well as any other aid or assistance that may be judged necessary for the prosperity and development of colonial settlements.

In addition to the foregoing, the Government furnishes emigrants board and lodging for eight days, and free transportation from the port of their disembarkation to the locality to which they are going.

With the exception of a small number who come to engage in business, or to accept clerkships in business or commercial houses already established, the greater number, if one should judge by appearances, were never burdened with an abundance of this world's goods. A Brazilian steamer arrived a short time since from Rio Janeiro with several hundred Italian emigrants bound for the Italian colonies. On the passage down, thirteen died from small-pox. As dirt and filth are said to be conducive to the spread of that disease, it is a wonder they did not all die. While the vessel was discharging cargo at this port, the women and children (barefooted, bareheaded, ragged, and dirty) swarmed through the streets of the city, begging from door to door, gladly accepting food and cast-off clothing when money was not to be obtained. Owing to their starting empty-handed in their new homes, it usually requires years of hard labor and industry to acquire a small competence, by which time they have become so accustomed to the country and the habits of the people that they are content to remain. Some that are lucky enough to accumulate a small fortune in a short time, return to their native land, but a ten years' residence generally severs all longings for old home associations. There are a number of flourishing river towns and villages in the colonies, which carry on a lucrative trade with the inland settlements, furnishing them with hardware, machinery, groceries, and clothing, in exchange for their corn, wheat, wine, honey, hides, tallow, wool, and fruits. The raising of grapes and honey, and the manufacture of wine, seems to be more successfully conducted in the Italian colonies than in any other portion of the province. The mildness of the climate (snow and ice being unknown) and the fertility of the soil, producing all kinds of cereals, fruits, and vegetables in abundance, render it possible for any one not epicurian in taste or particularly fastidious in his dress to live in the agricultural districts without being compelled to do a great amount of labor. Cattle-raising is the principal industry of the country, but as it requires money and experience to follow that calling, most of the large estancias or ranches are in the hands of natives, whose wealth consists of land, cattle, horses, and sheep. Quite a number of English and German mechanics and engineers find employment in the railroad shops and on the river, lake, and ocean steamers, but they generally come out under contract for a stipulated term of years, subject, however, at the expiration, to a renewal, with an increase of wages, should they desire to remain. The coast lakes and rivers abound in excellent fish, large quantities of which are dried for exportation as well as for home consumption. In this branch of commerce the Italians compete successfully with the natives.

Since Brazil has commenced to gradually emancipate her slaves, the native African has greatly decreased in numbers, although it is nothing to still hear groups of old Congos or Minas speaking in

their tribal dialects. Although containing about the same area as the United States, Brazil claims only one-fourth as large a population; and while trying to compete with the States in offering inducements to emigrants, and welcoming all classes of European paupers within her boundaries, when it comes to the Chinese she finds she has no spare room. As a rule the German emigrants go to a country, engage in the different mercantile and industrial pursuits, stay in the country, make money, save it all, and thus add to the taxable wealth. The trade of the province, formerly controlled by the English, has of late years gradually passed into the hands of the Germans, where it is liable to stay, as there are no people who can compete with their shoddy goods, Jewish business acumen, and love of the almighty dollar.

RULE LETCHER,
Consul.

UNITED STATES CONSULATE,
Rio Grande do Sul, March 31, 1887.

ANNATTO IN JAMAICA.

REPORT OF CONSUL BEYLARD.

Annatto (*Bixa orellana*) is a native of South America, but it is to be found in the West Indies and nearly all tropical countries. It is a shrub or small tree, branching from the roots, to a height of from 12 to 20 feet; it may be readily trained to a small tree with trunk 6 to 8 inches in diameter, 10 to 20 feet high, and spread of branches 20 to 28 feet. It grows in this island from the sea-level to 3,000 feet above, and seems to flourish best in moist and shady places. There are several species of annatto; of these but two are known in Jamaica, *Bixa orellana*, the most common and valuable kind, and *Bixa alba*, or white annatto, which is occasionally met with. Of the former, there seem to be several varieties, some producing two crops of seeds a year, others flowering and fruiting continously; ordinarily but two crops annually may be counted upon.

The yield of a tree six years of age ranges from 6 to 12 quarts per annum.

The fruit consists of a terminal corymb of ten to twenty miter-shaped two valved capsules, each about 1¾ inches in length by 1 inch broad. In the *Bixa alba* the capsule is nearly round. The capsules are covered with spines, and when ripe open like jaws, each containing from forty to fifty seeds, the size of which is about equal to a grain of barley-corn, and covered with a resinous coat or testa, which constitutes the valuable product of the plant.

The capsules are picked when full, spread out to dry, and when open the seeds are gathered and again dried under cover.

It is essential that the capsules should be garnered before they open, as the sun and rain quickly bleach and wash away the color from the seed when exposed. The color is separated by the seeds in either hot or cold water, and stirring or rubbing them until they are quite clean, when the naked seeds are removed, the color precipitated, the water drained off, and the pasty mass formed into molds, placed in the shade to dry, and in the latter state is ready for use.

Annatto is employed here chiefly for coloring and flavoring food and chocolate and occasionally as a dye for fabrics.

The plant can scarcely be said to be cultivated here, as Jamaicans are prone to leave all things to chance, and seedlings are to be found in nearly every yard and provision ground, which answers the purpose of supplying the wants of the family, and the surplus is disposed of. The natives consider the price (6 cents per quart) too low to warrant them in engaging extensively in its production. I can only account for this in their constitutional objection to any and every form of labor which does not yield a fabulous return.

In starting a plantation the seeds should be planted in nursery-beds, and, when the young plants are about a year old, transplanted to the field and placed at a distance of from 10 to 20 feet one from the other. They bear at the age of three, and continue to do so for twenty or thirty years.

There are various shades of color to be obtained, from orange to dark red and scarlet, and by proper care in the selection of seeds, culture and curing, any desired shade might be produced, and the quality much improved.

I forward herewith specimens of both *orellana* and *alba;* also a photograph of a tree eight years old, the circumference of which is 25 inches, the height 20 feet, and the spread of branches 20 feet.

The amount of annatto exported from Jamaica for the year ending September 30, 1886, was as follows:

To England	pounds..	18,622
To Canada	do....	199
To America	do....	352,798
To France	do....	2,665
Total value		$37,440

LOUIS D. BEYLARD,
Consul.

UNITED STATES CONSULATE,
Kingston, Jamaica, May 15, 1887.

ANNATTO IN GUADELOUPE.

REPORT OF CONSUL BARTLETT.

Annatto grows in all kinds of soil; but, like all other plants, it prefers rich lands. When the groves are exposed to strong winds, the trees are stunted and yield a great deal less. It thrives at Guadeloupe (proper) at an altitude of 500 to 600 meters, but yields less and less as you ascend from 400 meters.

It is not necessary to plow the land. Holes must be dug to plant annatto. These holes must have a diameter of 50 to 60 centimeters and 30 to 40 in depth. According to the strength of the soil they may be set at a distance of 3 to 3.50 meters, and even 4 meters if the soil is rich.

The seed might be laid in the ground at once, a few seeds in each hole; when, later on, one of the best shoots should be left to grow and all the others pulled up; but one would have to struggle for a long time with weeds. The young plants would require a careful hoeing around

them for nearly a year on the whole extent of the plantation. Nurseries are preferable. The seeds are sowed in well-prepared beds, at a distance of about 30 centimeters between each row. The seeds should be perfectly ripe and dry, taken from the pods of the best variety. The seeds taken from dry pods, but fresh, also grow well. These beds should be carefully attended to during several months. When the young plants have reached a height of about 40 to 60 centimeters they may then be placed singly in each hole, and sometimes two, but later on one of these must be pulled up and placed elsewhere; it will surely take root if rainy, otherwise it must be watered.

The soil around the young seedlings should be mellowed and hilled lightly a few days after, in order that weeds should not take possession of the holes and destroy the young plants.

This plant grows very fast and is very rural, requiring little care after the plantation (or grove) has attained a certain size. It blossoms one year after being transplanted, and bears a few pods, but is yet far from having reached its full size, which may be 4 to 5 meters. In a rich land the trees will meet each other at a distance of 4 meters, and will shade the whole ground in four or five years. The ground should be hoed at least two or three times a year, as long as the trees have not obtained their full size.

The crop, of course, depends on the age of the grove, the dimensions of the trees, and their exposed position. In a rich and quiet soil, not exposed to the wind, trees, even younger, yield more than older ones in an unfit soil and constantly exposed to strong breezes. Seasons differ also, and the yield is more or less abundant.

Annatto bears twice a year; the spring blossoms always yield the largest crop. As for the financial result per hectare, only a person well versed in the business could state. Prices are not always regular, but vary, and certain planters' brands are more appreciated than others on the European markets. Annatto, however, yields regular crops, mostly sure, unless a hurricane or gale of wind turns the grove upside down. The trees then, unless they be completely uprooted, soon recover from the effects of such an accident, and very often the following crop is very abundant, owing to the forced pruning of the trees to clear them of the broken limbs.

It would be wise in such cases to take example from nature and systematically prune the trees.

As soon as the pods in the bunches commence drying and opening, these bunches must be cut, by the means of shears or a crooked knife. These bunches are packed in baskets and transported to the shed prepared for that purpose. This is the most tedious work of the crop, for every pod must be picked with the hands; as much as possible the seeds attached to the white film inside should be left untouched. The pods when empty are of no use, except to be added to the manure heap. This work of picking is generally done at the price of 5 centimes per kilogram, by women and children, who often succeed in making a good day's wages.

As for the composition and the making of the coloring pulp, which is the final result of the crop, and of the various mills and implements used for that purpose, as well as the way of barreling up for shipment, a visit of a few hours in an annatto factory would teach more than a lengthy article on the subject.

INFORMATION FROM MR. ROLLIN, THE LARGEST ANNATTO PLANTER IN THE COLONY.

One hectare of annatto trees ought to yield, on an average, 1,500 kilograms of green seeds for the two crops, say about 7 casks of merchantable pulp, weighing each from 190 to 200 kilos.

According to altitude, the first and second crops are respectively the most abundant. The largest in the heights are in July and August. In the lower regions, they are in December and January. In general, in the lowlands, the crops of July and August are of no account, unless the land has been irrigated.

Five centimes per kilogram are generally paid for picking the pods from the hills where green annatto is gathered. In the lowlands, the maturity takes place all at once. The pods dry up rapidly and are lighter and more difficult to pick. I have often been obliged to pay 10 centimes per kilo, under such circumstances.

The crop is gathered from the 15th of July to the last of August; on the hills a little sooner, according to the quantity of rain in the lowlands

At this moment annatto is worth 40 to 50 centimes per kilo (the pulp) on the European markets. At these prices I think that the loss must be of about 15 to 25 centimes per kilogram, according to the fertility of the soil and the organization of the plantation and means of manufacturing the pulp.

For my part, I am thoroughly installed; beside, my lands are very fertile and I believe that I shall lose about 10 centimes per kilogram, which, for the extent of my cultures, will amount to about 15,000 to 18,000 francs dead loss.

Unfortunately it is to be feared that this state of things may last several years, the decline in price being caused by overproduction; whereas the mineral pigments keep increasing daily in quantity, in beauty, and, above all, in lower prices.

The director of the Botanical Garden at Basse-Terre informs me that he does not think the annatto tree would flourish in any part of the United States.

There were exported from this colony during the year 1886, 629,718 kilograms of annatto, of which 592,815 kilograms went to France.

CHARLES BARTLETT,
Consul.

UNITED STATES CONSULATE,
Guadeloupe, April 25, 1887.

SPURIOUS AMERICAN GOODS IN SALVADOR.

REPORT OF CONSUL DUPRÉ.

In my dispatch, No. 19, I adverted to the fact that products of American toil, skill, and industry are supplanted in Salvador, and I suppose everywhere in Central America, by base imitations. *Iron* "machetes" are substituted for those of *steel*, as manufactured in Connecticut and New York. The trade-marks of American artisans are stamped or imprinted on the worthless German implements. I am told that 50,000 "machetes" are sold annually in Salvador at an average price of $3.50 each. American osnabergs, sheetings, muslins, and calicoes are driven out of Central American markets by goods bearing the brands and trade-marks of the best American mills. These worthless German goods, made of East India and Egyptian cheap, short-staple cotton, are utterly valueless.

Perhaps the poorest beverage I ever imbibed was German claret sold here and bearing the trade-mark of the best wine-grower of California. Beautiful bottles, bearing on their exteriors pretty labels of the great beer distilleries of Saint Louis, Philadelphia, and Milwaukee, are full of foul decoctions brewed in Germany. Perhaps

the deadliest of all these beverages is the "Kentucky whisky," so labeled, but distilled in Germany.

I have seen "Colt's" and "Remington's" repeaters sold here that were never in the United States. I was told that these last were products of that forgotten "Birmingham" *of England*, but these illiterate, untraveled natives demand the cheapest goods, cast-iron *sewing-machines* (German), wares, axes, and beverages, and are supplied with them by Germany. May not the *co-operation* of these American producers send hither an agent selling nothing but American products? Would not such a "wholesale" agency, educating the people, speedily expel fraudulent and worthless goods from Salvador?

L. J. DUPRÉ,
Consul.

UNITED STATES CONSULATE,
San Salvador, Central America, April 13, 1887.

LAWS OF THE MOSQUITO RESERVATION.

REPORT OF CONSUL BROWN.

I submit copies of the laws of the Mosquito Reservation, recently adopted by the executive council of municipal authority, charged with the government of that assigned district of Nicaragua.

By these laws it will be seen that the duty on general merchandise imported into the reserve is increased to 7 per cent. on the cost of such merchandise instead of 5 per cent., as required since August 1, 1885.

One act establishes that port dues shall be collected of all vessels entering the port of Bluefields. It will be recollected that prior to the adoption of this regulation no charges of any kind have been imposed on vessels entering any part of the reservation.

In the act regulating the labor question is a provision limiting to fifteen the number of laborers from abroad that each proprietor of a plantation may employ. This question, by reason of rapid increase of the cultivation industry on Bluefields River, is assuming importance in the reserve.

When the demand for such labor commenced it was supplied by such common laborers as were to be found on the coast. This did not prove to be a satisfactory supply, either in quantity or quality, and could be had only for short terms of service; but during the past year laborers have been brought from the United States, principally from Louisiana and the adjoining States. Nearly every steamer coming from New Orleans during that period has brought to the Bluefields plantations one to three colored laborers from that port, and by one steamer on one occasion eighty laborers were brought to Bluefields.

Another regulation is the act to prevent the importation of dynamite, with an omnibus provision directed against other dangerous explosives.

The adoption of this act is supposed to have been suggested by the common practice of foreign residents, while traveling on the rivers, of carrying Winchester rifles or Smith & Wesson revolvers; also the common use by the native fishermen of dynamite to expedite the

patient labor of fishing in the lagoon, for which purpose they keep on hand a ready supply of dynamite bombs.

The probable effect of the strict enforcement of these laws is exciting discussion and criticism of the foreign residents of the reservation, many of whom, either as capitalists or as laborers, are directly concerned in the cultivation of the plantations.

FRUIT TRADE.

This is also a subject in which much interest will doubtless be felt by the importers of foreign fruit engaged in that trade at such distributing cities as New Orleans, Baltimore, Philadelphia, New York, and Boston, as there are in each of those ports buyers of the reservation bananas. One Philadelphia firm, fully impressed with the conviction that there is an increasing demand in the United States for the banana as a general article of trade, have recently been directing their energies to encouraging the increase of production of that fruit on the Bluefields River. To that end and as inducement to the producers, they have offered to pay $1 currency of the country per bunch for the fruit in cargoes of 8,000 to 10,000 bunches, saying that as soon as the increased production will justify them they will put in the trade larger steamers, with a carrying capacity of 10,000 bunches.

They claim that the business would be more profitable to them to pay the higher prices for the fruit and employ larger steamers, if assured of a cargo of 8,000 each trip, than it is under the present arrangement.

Although the amount of production is steadily increasing throughout the reservation (and plantations are being made in Nicaragua proper), and the six or seven steamers continue making their usual trips to Bluefields to supply that trade, bearing away cargoes of 3,000 bunches, yet it sometimes happens that vessels depart from there unable to obtain full cargo. In this connection I may say that I am informed that so much has the demand for bananas increased that during the coming season there will be sailing from Boston seventy-five steamers, each of the carrying capacity of 9,000 bunches, and making round voyages of twenty days between that port and all tropical-fruit-producing districts of this coast.

The Bluefields River banana, it is asserted, rates higher in the foreign fruit market in the United States than any other imported banana, not alone because of its intrinsic merits as a banana, but because it is transported from the plantations to the market in the United States with less handling than such fruit necessarily is subjected to when shipped from Port Limon and other ports in these waters.

The development of the banana industry in the reserve is now attracting the attention of capitalists in the interior of Nicaragua. During the last four months a number of them from Granada, Managua, and other centers of the Republic have visited, despite the privations of such a journey, Bluefields in pursuit of lands on which to cultivate bananas. Some of them have succeeded and are now actually at work with large gangs of laborers clearing and planting the lands. In some instances, in which suitable land within the limits of the reserve could not be leased, the parties have taken up lands outside of the assigned district, but on that portion of the

Bluefields River and its branches which in Nicaragua retains its Spanish name of Rio Escondido.

Some months ago it was that people in the interior began to be interested in the glowing reports which reached them reciting the flow of American gold into the reservation, resulting from the cultivation of bananas for export, but it may be noted that such interest did not manifest itself in a practical form until after the publicly announced purpose of the Government of Nicaragua to reclaim "the great interests of the Republic in that region."

President Cardenas, in his last message to the Congress, of January 16, 1887, alluding to matters of the Mosquito, said that those interests had been neglected because of the lack of the means of asserting them; that the limits of the reservation ought to be marked; that a commissioner of Nicaragua ought to be appointed to reside at Bluefields, and that the regulations which should govern the exercise of the rights of sovereignty of the Republic and the municipal rights of the Mosquito Indians in the assigned district should at once be adopted, and that an ordinance embodying those objects would soon be submitted to them for consideration.

The new administration under President Carazo has made but few appointments, and it is not publicly known whether the projected ordinance has been submitted or not to Congress; but it seems to be thoroughly settled belief that it has been decided to appoint General Ysidro Urtecho, formerly gobernador at this port, to be commissioner of Nicaragua in the reservation, and he will perhaps also discharge the duties of gobernador of San Juan del Norte while a residence at Bluefields is being erected for such commissioner.

One of the results of the fruit cultivation in the reservation is the decided increase of its foreign commerce. It is impossible to obtain just what the increase amounts to, as shown by the official returns, because they are so imperfectly kept, but I have heard the opinion expressed that the total of 1886 would show a gain of 40 per cent. over that of 1885.

The greater part of this commerce is had with the United States

WM. A. BROWN,
Consul.

UNITED STATES CONSULATE,
San Juan del Norte, April 17, 1887.

ANNUAL LAWS OF THE MOSQUITO RESERVATION, 1887.

AN ACT to regulate the different licenses and to amend certain river licenses.

Be it enacted by the executive council of the municipal authority, and it is hereby enacted by the authority aforesaid, That upon and after the 1st day of April the following licenses shall be paid:

A first-class license to sell liquors and merchandise, $150 per annum.
A second-class license to sell malt, wines, and merchandise, $100 per annum.
A first-class license to sell merchandise only, $60 per annum.
A second-class dry-goods license, $30 per annum.
A first-class river-shop license to sell malt and merchandise, $100 per annum.
A second-class river-shop license to sell dry goods, $60 per annum.
Turtle fishing, license to remain.
Tax on rubber, $1.
Exportation, ¼ cent.
The annual head tax, $2 per annum.
Auctioneer's license, $10 per annum.

That all trading vessels on the river shall be in proportion of the shops' license, including all boats of whatever description, in accordance with section 8 of the act.

The local magistrates are directed to be paid out from time to time, whether the stock of the second-class licensed person exceeds the amount of $500; and if the said licensed person evades the law he is liable to fine of $50 and be deprived of the privilege of selling under license in future.

That all special duties remain in full force.

AN ACT entitled "An act to amend section 7 of the act for the better securing of the revenue of the Mosquito Reservation."

Be it ena ted by the executive council of the municipal authority of the government of the Mosquito Reservation, That from and after the passing of this act a duty of 7 per cent. shall be paid instead of 5 per cent.

That no person having a second-class license is allowed to import and sell spirituous liquors under penalty of $50 for the first offense, and for the third confiscation of the liquors.

And it is hereby enacted, That all commission merchants shall take out a regular trading license, either first or second class, and that on no pretense shall goods be consigned to other merchants for the purpose of evading the law, but the said commi sion merchants shall be deemed traders to all intents and purposes whether they kept a store or not.

AN ACT entitled "An act to suppress drunkenness in the rivers of the reservation."

Be it enacted by the executive council of the municipal authority, and it is hereby enacted by the authority aforesaid, That any person or persons who shall keep a still for the purpose of distilling and selling spiritous liquors in any of the rivers of the Mosquito Reserve without first obtaining permission from the council, that such person or persons found doing such unlawful act shall be liable to a fine of $500 and imprisonment, with confiscation of all apparatus used for such purpose.

It is enacted, That from and after the passing of this act all goods, wares, and merchandise, arriving in steamships for the river shall be warehoused, and if not complied with the captains or agents will be liable to fine of $250.

It is further enacted by the authority aforesaid, That from and after the passing of this act the government will not receive the Columbian half-dollars for more than 40 cents.

Be it enacted by the executive council of the municipal authority for the government of the Mosquito Reservation, That from and after the passing of this act all foreign steamers entering into the port of Bluefields, the captain or agents shall pay port dues of $20 at each time of entry after a complete trip.

All sailing vessels, from 20 tons and upward, entering into the port of Bluefields, shall pay port dues of $10 each, and vessels under 20 tons $5 each.

AN ACT for regulating the labor question.

Be it enacted by the executive council of the municipal authority fo the government of the Mosquito Reservation, and it is hereby enacted by the authority aforesaid, That all contracts for labor made in any foreign country must be under the hand and seal of the authority of the country where the contract is made, and, upon arrival the employé must personally appear with such before the magistrate and give bond in the sum of $50 for their good conduct. The magistrate will record said contract, which will be binding in this country.

And it is further enacted by the authority aforesaid, That all captains of steamships or other vessels bringing persons or laborers whose names do not appear on the manifest or list of passengers and signed by the authority of the country or port whence the ship comes from, will be compelled to take back such persons, and in default suffer a penalty of $50 for each man.

And it is further enacted, That each proprietor of a plantation may have 15 laborers from abroad, and when the contract is fulfilled send them back hence or renew the contract before the magistrate if they desire to remain.

Be it enacted by the executive council, and it is hereby enacted by the authority aforesaid, That whosoever shall sell or lease any public land without having any document from the government shall be liable to a fine of $250 and imprisonment

of three months, with hard labor, and with forfeiture of the land by the one purchasing.

And it is further enacted by the authority aforesaid. That all leases granted to natives must be continued, and not transferred but to their heirs and assigns * * * and such be considered as entailed property.

Done at the council chamber, Bluefields, March 31, 1887.

AN ACT to prevent the importation of dynamite and other explosives.

Be it enacted by the executive council of the municipal authority for the government of the Mosquito Reservation, and it is hereby enacted by the authority aforesaid, That from and after the passing of this act the free importation of dynamite and other explosives is declared unlawful.

That whosoever shall hereafter import any of the above-mentioned unlawful explosives shall be liable to a fine of $500, or imprisonment for one year with hard labor for the first offense, and banishment for the second.

And it is further enacted, That every person found in possession of any of the above explosives is required at once to deliver up same to the magistrates of the place under the above-mentioned penalty. The local magistrates are ordered and directed to confiscate all such explosives that may hereafter be imported. And it is hereby directed that all duties payable to the government must be paid punctually into the treasury every quarter by all collectors and magistrates.

That it shall be lawful to grant a river-pilot license at $25 per annum.

Done at the council chamber, Bluefields, April 1, 1887.

THE PERUVIAN AMAZONES.*

SO-CALLED PANAMA HATS.

The art of manufacturing hats—called in France "Panama hats," doubtless because to arrive here they sometimes pass by way of the isthmus of that name—has its origin in Guayaquil, and from thence was imported into Peru some fifty years ago. Ten years back it was a flourishing business, but its importance has greatly diminished.

This decline is owing to the progress realized in the European manufacture, which delivers its produce so cheap as to make competition of a hand-made article difficult. In Brazil, where the sale of the "Panama" was once sure and profitable, one can obtain to-day for one franc and a half an Italian straw hat, arranged more or less to the day's fashion, whilst the most ordinary Peruvian hat costs at least 2 francs. It is true that the first is of little duration, but the second is not arranged to modern taste, and the Indian women of the department of Loreto that knit them do not introduce any modification in their traditional shape.

The population of Moyabamba, Sarapoto, and Somas, that lived on the hat industry, has considerably diminished, and in my trip on the borders of the Ucayali and Pachiteu I found quite a number of its ancient inhabitants actually employed in the more lucrative gutta-percha industry.

The preparation of the straw for the manufacture of hats is rather delicate. The first material is obtained from the undeveloped leaves of the *bombonax*, palm-tree. The fibral parts are separated. For this a hook is employed, resembling a hair-pin. The ribbon, separated by the two points, is that used, and all the straws used in the manufacture of a hat are cut in the same way and must have the same width, having to be equally cut by the same instrument. They make balls of these ribbons of straw, and submerge them in boiling water during six hours, exposing them to the dew for whitening, and afterwards dry them in the sun.

The value of the "Panama" increases in proportion to the fineness of the straw. The ordinary hats have three numbers, No. 1 being the least fine. In Mayobamba the following prices per dozen are current: No. 1, 6 soles (24 francs); No. 2, 8 soles (32 francs); No. 3, 12 soles (48 francs).

To make a hat described as No. 1, on an average, three days of labor are required;

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*Translated by Minister Buck from the reports of M. Olivier Ordinaire, late consul of France at Callao, published in the Bulletin of the Geographical and Commercial Society of Paris.

for No. 2, four days ; and for No. 8, five days. Some workers, practiced from infancy and of exceptional expertness, are able to make a No. 3 hat in a day and a half. The price of the hats in Mayobamba called "fine" vary from 10 to 50 soles, it requiring from one to three months to make such.

The working of hats in the department of Loreto surpasses the figure given in the table of exportation by the Amazon, because Mayobamba exports a great quantity of its products to the Pacific coast. Besides, this city sends every year to Celendin, in the mountains of Peru, prepared straw, ready to be woven, for at least as many as 50,000 hats. The price of this straw varies according to the quality of the hats for which it is intended, and it may be of interest to our manufacturers to know that it is as follows:

Nos. 1 and 2, per piece, 10 centavos (40 francs); No. 3, 20 centavos (80 francs). For the fine hats the price varies from 80 centavos to 1 sole.

The freight expenses on a bale of 400 hats are: From Mayobamba to Yurimaguas, 8 soles; from Yurimaguas to Pará, 5 soles; or, say, 13 soles, or 52 francs, from Mayobamba to the port on the Atlantic.

TOBACCO.

The plantation situated in the neighborhood of the small town of Tarapato, and on the left bank of the Huallaga at 3 leagues distance from the river, produces nearly 5,000 arrobas (125,000 pounds) of tobacco annually.

The current price at Tarapoto is 6.40 soles the 25 pounds, and the expenses from Tarapoto to Pará are 1.85 soles.

The current price at Pará varies, according to quality, from 10,000 to 25,000 reis.

The operation is explained by this fact: The purchaser, at Tarapota, is accustomed to pay to the producer, in merchandise, at least a part of the amount owing. The tobacco is sold in bundles, bound in special wrappings of palm leaves. It is strong and odorous; but in the Pará and Manaos markets the "Rio Negro" tobacco is preferred, and is sold at from 60,000 to 70,000 reis the 25 pounds, and above all is preferred to that of the province of Acará, which reaches the price of 100,000 and 120,000 reis.

VEGETABLE IVORY AND SARSAPARILLA.

The original balls of vegetable ivory taken in the forests of the Upper Amazon have the shape and size of an average potato. They are the fruit of the palm tree, and fall of themselves when ripe. They are known in Peru under the denomination of "Cabeza de negro" (negroes' head), from the spherical envelope that contains them, ten to twenty in each. The freight on vegetable ivory is 1 sole per hectoliter from Marañon to Pará. The expense of gathering and conveyance in the woods can be estimated at about 2 soles; the freightage on the hectoliter to Pará varies from 3.33 to 4.44 soles.

The exportation of sarsaparilla has considerably diminished in Peru, on account of falling off of the price in European markets.

In Pará sarsaparilla has been sold up to 40 soles the 25 pounds, and to-day it is not worth more than 9 to 10 soles.

HAND-LABOR—SYSTEM OF TRANSACTIONS.

In the department of Loreto the hand-labor is done by the natives. The whites, Peruvians or foreigners, are in a great minority in the operations they conduct. The natives are divided into a great number of tribes or nations, but they can be classified, in order to study them, in two principal divisions—those who speak the "Quichua" or "Inca" Indian language and those who express themselves in dialects that do not yet figure in any dictionary.

By the first, natives of the provinces nearest Mayobamba, all the agricultural products or manufactures—the hats, the straw, and tobacco—are produced.

The others have so far not contributed anything to commerce, except more or less frequently to bring to it strange products and gutta-percha.

Manual laborers are from this second class, who are utilized within a certain radius of the place where they are found.

The indigenous "savages" or "chunchos" (names given by the Peruvians of the mountains to the Indians that have preserved their primitive religion) never assemble in groups. They are disseminated in the forests. From this is explained the circumstance that they are sometimes found isolated. This isolation is advantageous to the one and the other; to the first, because they primarily live on hunting, and to the second that otherwise the gutta-percha might disappear as rapidly as game in the vicinity of a town or city.

When for the first time one penetrates into the solitary habitation of a "cauchero" (gutta-percha operator) one is verily surprised to see the stores which he observes of cotton goods, liquors, cutlery, guns, ammunition for hunting, &c. This is the coin with which the laborer is recompensed. On the shores of the Ucayali the Indians of the Panvis race—Conibos, Sipibos, Sheteboo—in communication with the whites for a long time, know the worth of silver, and its value serves in traffic to measure the price of labor, which is not paid in money, but in articles of commerce.

IMPORTS AND EXPORTS.

Under the commercial point of view this section has only very indirectly felt the ills of civil wars that during many years have been so disastrous to commerce on the coast. Finally its articles of importation are not subject to those custom-house tariffs which affect the merchandise disembarked at the ports of Western Peru. The import duties, either to Lima or Brazil, are from 30 to 40 per cent. of the estimated value of the articles, while they are only 7½ per cent. on the invoice prices for goods brought into Peru by the way of the Amazon. The same advantage exists for exports.

Whilst the Brazilian gutta-percha pays an export duty of 23 per cent. of its value, that exported from Peru only pays 4 per cent.

The Iquitos market has been during many years tributary to that of Pará, which, by the capital it controlled, the seniority of its establishments, and its situation as a maritime port, had become the storehouse or general depository for the Amazones. But since some years the increase of the exports from the department of Loreto has given to Iquitos, at least in great part, the means of freeing itself from that tutelage. It seeks its supplies direct from Europe or the United States, that have only to bear one transshipment at Pará or in Manaos before arrival.

From the departmental statistics of imports and their respective figures, the producing or contributing countries are rated in the following order: First, England; second, the United States; third, France; fourth, Germany; and fifth, Portugal.

England has the advantage on account of the low price of her cotton goods, prints, calicoes, and ordinary or common cotton goods; the United States for its flour, lard, sewing-machines, ordinary furniture, petroleum, and hatchets; and France for her articles of fashion, ribbon, silken goods, ready-made apparel, perfumery, wines, and preserves. Germany sends cashmeres, wool and thread, beer, and all classes of implements for fishing, and imitations of the greater part of our (French) articles at very low prices. Quite the contrary to what happens throughout other parts of Peru happens in the district of Loreto; that is to say, French importation surpasses the German. A proof positive of progress is this public demand which requires and looks for the best qualities. Portugal shares with France and the United States the preserve trade. Likewise are imported dried fruits and wines, and, as a ready-made article, a light and comfortable slipper in general use in the Amazones.

Among the articles of considerable sale in the "Montafia" (Peruvian Amazones), and manufactured expressly for it; giving it the shape that habit requires, I will mention the "impulli"—a knife of long blade intended to cut grass—and the "machete" (chopping-block), carried by all who penetrate the woods. Germany imitates these articles, formerly monopolized by the United States.

METHOD OF TRADE.

An "arroba" (Spanish arroba is 25½ pounds) of gutta-percha is worth on the Ucayali, to the workman that furnishes it, 10 soles in merchandise. This system suits the Indian, that fears neither hunger nor cold, that only works in order to obtain the objects he has seen. In his turn the purchaser who seeks for gutta-percha in steamships or in canoes pays (the local dealer), at least in part with merchandise, and this system of direct exchange makes, consequently, an important coasting trade.

If one goes up the current of the rivers until reaching the country of the "Campas" (an Indian tribe), living in a region nearer the Andes, Indians are found that have no idea of the value of coin in purchasing merchandise. Coin has no value for them unless pierced or strung for a necklace.

These "Campas," who for a long time have been considered dangerous and rebellious to civilization, are capable of performing useful work; and, furthermore, they comply with their engagements. At the confluence of the rivers Palcazu and Chuchuras, in a region that was considered until recently as completely uninhabited, I found the establishment of a German, who had lived there for four years. He had managed to gather some sixty Campas families, who lived in a circle of many leagues around his habitation. They could gather 100 arrobas (say 2,550 pounds) of gutta-percha per year.

According to the calculation that he made me, each arroba (25½ pounds) was worth at Iquitos 14 or 15 soles (56 to 60 francs), while he obtained it for 2 reales, that is to say, less than 1 franc, paid to the Campas in merchandise; thus further they took care of his plantations of "yuccas" (an edible root) and bananas, and provided him with an abundance of game.

The distance and expense for transportation is far from offsetting such advantages. It can be said, generally, that for the gutta-percha and other produce of value the regions most distant from civilization are the most profitable for the colonists.

AGRICULTURE.

Although the soil is fertile, even to excess, agriculture hardly exists in the department of Loreto. All activity of colonists is absorbed by the working and commerce of gutta-percha; perhaps there is no more favorable region existing for the cultivation of rice, and, nevertheless, almost the totality of the rice consumed in the country where the land belongs to the first occupant is imported from Brazil. The same with potatoes, that are imported to Iquitos from Havre and Lisbon—a surprising fact, when one considers that Peru is the country where potatoes originated, and if its yield is bad in the Montaña, the neighboring mountain valleys produce them in abundance and of the best possible quality. It is true that in order to obtain them it would be necessary to establish a road, and this appears to be about what the "caucheros" (gutta-percha workers) least think of.

The Peruvian Amazon in reality does not export other agricultural products than the Tarapoto tobacco. The sugar-cane cultivated on some haciendas on the Marañon is converted into "tafia" (sugar-cane rum), which is consumed in the department itself. The plow is not known there. After having burned the forest, the ground is planted or sown without breaking the soil. In the valley of the Ucayali the mud of the river is taken advantage of. When the waters decrease on the river borders corn, onions, and beans are sown, and the crop is harvested long before the rise of the river. Corn ripens at four months; onions, beans, and turnips at three. In the Marañon farms the sugar-cane, of from 3 to 4 meters high, is cut at eight or nine months of age, and the plant endures twelve years. The soil of the Brazilian Amazones is less rich. At Benavides, a town near Pará, where a small French colony exists, the cane plantations must be renewed every three years, the same as on the Pacific coast in the province of Lima.

But that which most attracted my attention in Peru, and in the powerful soil of the Amazones, was the vigor it gives to the vine. The surprise was greater on finding "stocks" on the road, in view of the fact I knew that at Chanchamayo (an elevated mountain valley) plantations of this kind had not prospered. But to-day I am convinced that the failure of the enterprises referred to was owing to the want of proper "budding."

The first "stock" I saw was at Yurimaguas. It formed an immense vine containing more than three hundred bunches of grapes, of medium size, good grain, black, and slightly acid. I found many like it on different farms, especially in Caballa Cocha, on the shores of a small affluent of the Marañon, it being assured to me everywhere that ordinarily they gave three crops a year. In my transit I was unable, of course, to verify the fact; but it is certain that the grape-vine gives in those countries exceptional results. Nevertheless, no one has as yet cultivated it in the department for making wine. All the wine drank at Iquitos is imported from Europe, and is expensive. The same is true with some vegetables, which are brought from the Ucayali, which bring very high prices. Therefore, horticulture and vine-culture would give larger returns in the neighborhood of that city, and more sure perhaps, than even gutta-percha.

OPENING FOR TRADE.

In consequence of its distance from the capital, the lack of means of communication with the Pacific, and also in consequence of the desire that the Peruvian Government has always manifested to favor the colonization of the rich regions of the Montaña, the Peruvian Amazones live, at least under the commercial point of view, an independent life.

Rifles, or guns for hunting, are an important article of trade. The most acceptable pattern is that of the British, or Belgian, muzzle-loading gun of the best quality. Forcibly, the breech-loading arm will have to take its place as soon as it becomes known to the tribes. It is necessary to state that the needle and pasteboard cartridges are not suitable, as they expand quickly, in consequence of the humidity which always saturates the atmosphere. The metallic and central fire systems are preferable. From the United States there has already been received a type at

Iquitos, with copper cartridges and with movable stem, screw system, and which can be loaded with the ordinary cartridge. Our manufacturers should make a note of this.

CONCLUSIONS.

The Peruvian Amazones should be considered in three phases: (1) As an outlet and producing country; (2) as an objective point of a navigation lens; (3) as a country for colonization.

Under the first phase, from the mere fact that it has not been lacking in progress, notwithstanding a general crisis, it deserves to attract the attention of our merchants, who would extend their trade, and our business people, who ought to take into account actual requirements in order to create articles to satisfy them. It would be advantageous for both to form syndicates with the object of sending to those regions not only travelers to place their merchandise but chemists who should be charged with the mission of studying its natural products.

Professor Agassiz, who crossed some twenty years ago the basin of the Amazones, calculated at four hundred millions the values that were lost to the world from it yearly. It is true that exportation has increased in enormous proportions, but since the voyage of that illustrious sage the naturalists who have crossed the country have been more occupied in determining to what family particular plants may belong than to determine their commercial value. It should be considered that the gutta-percha, quinine, sarsaparilla, copaiba, and other materials actually worked are but a sample of the riches of the Amazones. The valuable woods, the elastic gums (that might replace more or less advantageously those that industry employs to-day), fat oils or essential ones, and medical plants are abundant, without mentioning the famous "curare," made of a number of juices which the Marañon Indians employ for poisons as well as remedies. Others chew a sort of bark that seems to have the same properties as the "coca," which in its recently-discovered uses has made the fortunes of some houses in Lima and Bolivia.

The balsam that is commercially known as "balsam of Peru," does not come from Peru, where they do not know how to work it, but from Central America; nevertheless the "*myroxilum*" that produces it is common in certain forests of the Montaña, especially those along the borders of the Pachitea River. Many other products there are of the kind.

The utility of chemists in the Amazones is incontestible, not alone for shipping houses that might primarily profit, but for general industries to which they might furnish valuable elements. Our commercial people should not yet be satisfied with this study and exposition. The Peruvian Amazone could be chosen in which to establish branch houses, as a wealthy New York house has just done, looking to the appropriation of all important points of South America.

I will now pass to the second phase. The example of the navigation companies actually established prove that a French line from Havre to Iquitos, with stoppages in England and Lisbon, could acquire great profits. The failure of the trial made in late years of a line which only commenced with "Manaos" had its result in special causes, which a new line would know how to avoid. The province of Manaos and the Iquitos merchants would give it, I am led to believe, an important subsidy.

The colonization question is that which leads to greatest controversy. It is true that the merchant who passes his time in his store or under the tent of his steamer and follows rigorous hygienic methods of life can live in the Amazones, and even in Pará, which is the place, as is asserted, the most unhealthy. Numerous French families have become acclimatized in that town, and still better at Manoas and other ports higher up the river. But would it be the same for an agricultural settler, or woodsman, obliged at starting to live from the fruit of his labor?

Some twelve years ago sixty Frenchmen established the colony of Benavides at 2 leagues from Pará. To-day there only remains one-third of them; the remainder could not endure the climate. The white man feels impotent in face of that colossal vegetation, and finds himself consumed, beaten down by the boiling sun, where the Indian works bareheaded and without perspiring.

The Brazilian Amazones is more a country to be worked than to colonize. As one approaches the Andes the temperature diminishes. On the Ucayali one suffers less from heat than from mosquitoes, and on the borders of the Palcaza this plague, a real plague that should be taken into account, is only felt during two months of the year.

In Peru, as in Brazil, the "cauchero" who works during the rainy season is exposed to intermittent fevers. He evades them by retiring from the month of December to the month of April to his habitation in the highlands, or on the borders of a river that opens a forest and gives it air and sun. On the other hand the

European settler, who has at least the notion or instinct of economy, which the Indian lacks, has a superiority which in the course of time enables him to appropriate advantages from the labor of the native.

In the Montaña of Peru I have not found a single white man, even those who arrived with no resources, that had not under his orders one or more aborigines.

In conclusion, excellent for improvement, the basin of the Amazones is likewise one of the places of the torrid zones most favorable for colonization.

THE HAWAIIAN ISLANDS.

REPORT OF CONSUL-GENERAL PUTNAM.

The annual report of the collector-general of customs of the Hawaiian Islands for the year terminating December 31, 1886, presents some important and encouraging statistics. In the midst of the general business depression throughout the world, with the uncertanties of results depending upon the continuance of the treaty with the United States, burdened by the disaster of a great fire which consumed one-third of the business and residence portions of the city, the official exhibit gives the most gratifying and encouraging evidence of the steady material prosperity of the islands. These facts are attributable largely to the pluck and energy of the foreign, and especially of the American, elements, which has become an important factor in the present and the germ from which will spring the results of the future of the country.

Not only has the acreage under cultivation been increased, but the yield of the soil has been brought to an average in the chief product, sugar, unsurpassed in any other sugar district in the world. This is to be accounted for by the climate and soil, both so well adapted to the growth of the cane, to the superior cultivation, and the admirable machinery brought into service to exhaust the succulent plant of its juices. The other products of the islands have increased, but as the reports are limited and but little felt abroad it will not be interesting to carry them into detail. The rice crop is progressive, but the local demand, owing to the large Chinese population, leaves but little for export.

In consequence of the contiguity of the islands to the Pacific coast of America and the consequent close alliance of the people of the two sections, almost the entire commercial intercourse of the Kingdom is with the United States. This is evidenced by the fact that 76.22 per cent. of all imports and 99 per cent. of all exports were from and to the United States.

The total value of domestic exports for the year amounted to $10,340,375, an increase over 1885 of $1,381,712. The total quantity of sugar exported during the year was 216,223,615 pounds, valued at $9,775,132, an increase of 44,873,301 pounds over the total export of the previous year.

The value of imports during 1886 amounted to $4,877,738, against $3,830,544 for 1885, an increase of $1,047,194.

The increase in the value of dutiable goods was $448,256; goods free by treaty, $529,698; bonded goods, $18,828; goods free by law, $50,412.

The total value of exports to and imports from the United States during the year was $14,414,751.30, or 94 per cent. of the entire

commerce of the islands. With Great Britain it was $369,739.80, or 2.41 per cent.; with Germany, $106,672.04, or .70 per cent.; China and Japan, $269,401.22, or 1.76 per cent.; Australia and New Zealand, $132,951.77, or .86 per cent.; all others, $41,508.28, or .27 per cent.

During the year the total tonnage entered at Hawaiian ports in foreign commerce was 222,372 tons, of which 132,669 were American, 43,848 Hawaiian, 35,296 British, 4,278 German, and 6,290 other nationalities.

During the year the tonnage of the island marine has been materially increased, 5 steamers, 2 barks, 4 schooners, and 1 sloop having been added to the Hawaiian register.

The income from customs was the largest ever known.

The exports of rice in the year amounted to 7,338,615 pounds against 7,367,253 in 1885.

The less important productions exported were: molasses, 113,137 gallons; coffee, 5,931 pounds; bananas, 45,862 bunches; wool, 418,784 pounds; sheep-skins, 9,255 pieces; hides, 31,207 pieces; goat-skins, 21,173 pieces; awa root, 20,372 pounds.

With very trifling exceptions these products were all sent to the United States.

J. H. PUTNAM,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Honolulu, May 2, 1887.

MEXICAN TARIFF.

TRANSLATED BY CONSUL-GENERAL SUTTON.

[NOTE.--The first number is the consecutive number after alphabetizing the English translation; the number to the right in parenthesis is the number in the original Spanish.]

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Cotton.		
1 (44)	Braid, cord and tape of cotton with india-rubber, which measure up to 4 centimeters in width, net weight	Kilogram	$1 60
2 (12)	Canvas of cotton linen or hemp, net weight	do	65
3 (11)	Chemises of cotton cloth, plain or embroidered, for ladies and children, net weight	do	3 00
	Clothing:		
4 (35)	Ready-made, and their separate parts when they come sewed, of cotton cloth, of all classes and textures, with or without trimmings of lace, strips embroidered in cotton or linen, belts (ribbons) of silk or metal, other than gold or silver, for adults and children, excepting those specified, legal weight	do	2 50
5 (36)	Of cotton cloth coming in dress patterns, of all classes, excepting those specified, net weight	do	1 70
6 (13)	Corsets of cotton, linen, or wool, of all classes, with or without small ornaments of silk, net weight	do	1 90
	Cotton cloths:		
	Bleached or unbleached, of all classes, of plain texture:		
7 (37)	Which do not exceed 30 threads in a square of one-half centimeter	Square meter	09
8 (38)	Which exceed 30 threads in a square of one-half centimeter	do	11
	Printed, dyed, or stamped, of all classes, of plain texture:		
9 (39)	Which do not exceed 50 threads in a square of one-half centimeter	do	12
10 (40)	Which exceed 30 threads in a square of one-half centimeter	do	15
11 (41)	Bleached, unbleached or colored, of all textures, not plain	do	17
12 (42)	White or colored, open-worked or embroidered	do	20
13 (43)	With mixture of false metal, net weight	Kilogram	2 50
14 (1)	Cotton waste or soiled thread, gross weight	do	02
	Cotton:		
15 (2)	Unginned, gross weight	do	03
16 (3)	Ginned, gross weight	do	08

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Cotton—Continued.		
	Cotton cloth:		
17 (4)	Articles of, not stated, of all texture, without embroidery, legal weight	Kilogram	$1 60
18 (5)	Articles of, of all textures, embroidered with another material not gold or silver, legal weight	do	2 25
19 (15)	Curtains of cotton, plain, embroidered, or open-worked	Square meter	20
20 (14)	Dress patterns of cotton cloth partly made, of all classes, with or without trimmings of cotton, for ladies and girls, net weight	Kilogram	1 20
21 (34)	Elastic of cotton and india rubber, of more than 4 centimeters in width, gross weight	do	60
22 (18)	Flutings (ruchings) of cotton, with or without cotton lace and small silk ornaments, legal weight	do	4 20
23 (19)	Fringe, galoon, passamenterie, edging, tape, cording, and netting, of cotton, linen, or hemp, with or without bugles of glass or metal not gold or silver, net weight	do	2 50
24 (24)	Garters and suspenders of cotton, with or without buckles, legal weight	do	65
	Gloves of cotton or linen, all sizes:		
25 (20)	Unlined, net weight	do	3 70
26 (21)	Lined, net weight	do	1 90
27 (33)	Hair nets of cotton, net weight	do	3 20
28 (26)	Handkerchiefs of cotton, embroidered, with drawn work or trimmed with cotton lace	Each	18
29 (17)	Lace and net of cotton, of any class, and all manufactures of these materials, even when they have some ornament of silk or metal not gold or silver, legal weight	Kilogram	6 00
	Rebozos (long shawls) of cotton and those textures which are printed, embossed, or striped, with designs or work which imitate them (rebozos):		
30 (30)	Up to 26 threads of warp and woof in a square of one-half centimeter	Square meter	1 20
31 (31)	Of more than 26 threads and up to 38 threads of warp and woof in a square of one-half centimeter	do	2 20
32 (32)	Of more than 38 and up to 64 threads of warp and woof in a square of one-half centimeter	do	4 20
	Shawls and similar warps of cotton of all textures, except net (lace):		
33 (27)	With or without fringe or embroidery of cotton or wool, net weight	Kilogram	1 80
34 (28)	With or without embroidery of wool or cotton and fringe of silk and wool or of silk and cotton, net weight	do	2 50
	Shirts, of cotton cloth:		
35 (9)	White and colored, all sizes, net weight	do	1 80
36 (10)	With bosoms, collars, and cuffs of linen, net weight	do	2 00
37 (7)	Socks, stockings, underdrawers, and undershirts, knitted, of cotton, and all kinds of knitted manufactures of cotton, not specified, even when slightly ornamented with silk, net weight	do	1 75
38 (6)	Tassels of cotton, even when their *almas* (inside) are of some other material, net weight	do	70
39 (23)	Thread of cotton, of all classes and colors, including crochet cotton, legal weight	do	1 20
40 (29)	Umbrellas, sunshades, and parasols of cotton	Each	80
41 (8)	Underdrawers of cotton cloth, all sizes, net weight	Kilogram	1 80
42 (16)	Vests and jackets of cotton stockinet, of all sizes, net weight	do	1 10
43 (22)	Weaver's yarn, or yarn cotton, all classes or colors, net weight	do	90
44 (25)	Wicking of cotton, gross weight	do	16
	Linen and hemp.		
	Articles not mentioned, of linen or hempen cloth, of all textures:		
45 (47)	Not embroidered, legal weight	do	1 80
46 (48)	Embroidered with any other material not gold or silver, legal weight	Kilogram	2 50
	Carpets and rugs:		
47 (45)	Of pure hemp, or tow, or any other vegetable fiber, not specified, of plain, crossed, or figured texture, uncut	Square meter	25
48 (46)	Of hemp only, or of any other vegetable fiber, not specified, cut	do	35
49 (68)	Clothing, ready-made and their separate parts when they come sewed, of linen cloth, with or without lace, trimmings, strips of linen or cotton embroidered, and silk ribbons (belts), for adults and children, excepting those specified, net weight	Kilogram	3 00
50 (60)	Cloth of linen, cut in pieces for dresses, of all classes, excepting those specified, net weight	do	1 90
51 (54)	Dress patterns of linen, partly made, of all classes, with or without trimmings or embroideries of linen or of linen and cotton, for ladies and girls, net weight	do	1 50
52 (57)	Elastic of linen or hemp with india-rubber, of more than 4 centimeters in width, gross weight	do	70

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Linen and hemp—Continued.		
53 (59)	Garters and suspenders of linen or hemp, with or without buckles, legal weight	Kilogram	$0 90
	Goods of linen, of hemp, of hemp-tow or herb-tow, white, unbleached, or colored, of plain texture:		
54 (70)	Having up to 12 threads of warp and woof in a square of one-half centimeter	Square meter.	13
55 (71)	Having more than 12 threads of warp and woof in a square of one-half centimeter	do	19
	Goods of linen or hemp, bleached, unbleached, or colored:		
56 (72)	Of all classes of textures, not plain	do	22
57 (73)	Open-worked or embroidered	do	35
58 (61)	Handkerchiefs of linen, embroidered, or with open work, or trimmed with lace	Each	40
59 (58)	Hemp, crude or in fiber, net weight	Kilogram	07
60 (55)	Lace and linen net of any class and every manufacture of these materials, even when they contain some ornament of silk or metal other than gold or silver, legal weight	do	9 00
61 (60)	Linen, crude or in fiber, gross weight	do	05
	Rebozos (long shawls) of linen and those textures which are printed, embossed, or striped with designs or work to imitate them (rebozos):		
62 (64)	Up to 26 threads of warp and woof in a square of one-half centimeter	Square meter.	1 25
63 (65)	Of more than 26 and up to 38 threads of warp and woof in a square of one-half centimeter	do	2 90
64 (66)	Of more than 38 and up to 64 threads of warp and woof in a square of one-half centimeter	do	6 15
	Shirts and chemises of linen cloth:		
65 (51)	Not embroidered, of all classes, sizes, and colors, net weight	Kilogram	3 80
66 (52)	Embroidered, of all classes and sizes, net weight	do	7 00
67 (63)	Shirt bosoms of linen, plain or embroidered, net weight	do	6 00
68 (49)	Socks, stockings, underdrawers, and undershirts, of linen stockinet, and all articles of linen stockinet, not specified, even when slightly trimmed with silk, net weight	do	2 00
	Thread (twine):		
69 (57)	Of hemp, crude or in colors, fine or coarse, including such as is half-twisted, of all sizes, in balls or skeins, legal weight	do	13
70 (58)	Of linen or hemp, white or colored, in spools, including carded thread, for rebozos (long shawls), legal weight	do	2 01
71 (62)	Umbrellas, sunshades, and parasols of linen	Each	85
72 (50)	Underdrawers of linen cloth of all sizes, net weight	Kilogram	2 45
73 (56)	Weaver's yarn, or yarn, of linen, hemp, or their tows, of all colors, net weight	do	14
	Wool.		
	Articles not mentioned, of wool, of all textures:		
74 (78)	Not embroidered, legal weight	Kilogram	2 25
75 (79)	Embroidered with any other material than gold or silver	do	3 51
76 (91)	Belting of woolen felt, in pieces without beginning or end, for machinery, when it does not come united to the latter, net weight	do	06
77 (74)	Carpets of coarse frieze, of plain or cross texture, or of beaten wool	Square meter.	75
	Carpets and rugs:		
78 (75)	Of short-nap wool, uncut, warp of hemp or any other material	do	1 11
79 (76)	Of woolen shag, cut or velvet finish, with warp of hemp or any other material	do	1 60
80 (77)	Carpets of wool, corded, with hemp or cotton warp	do	90
81 (106)	Clothing, ready-made, and their separate parts when they come sewed, of wool, of all classes of textures, with or without trimmings and linings of any material, excepting those specified, net weight	Kilogram	5 5
82 (83)	Cording of cotton or hemp covered with wool, net weight	do	1 20
83 (82)	Drawers and shirts for under or outer wear, of flannel or any texture analogous to wool, with or without trimmings of silk, net weight	do	2 10
	Dress patterns partly made of wool of all classes:		
84 (84)	With or without embroidery of wool, or of wool and cotton, and with or without trimmings of silk, and cotton, linen, or woolen lace, for ladies and girls, net weight	do	2 50
85 (85)	With borders or embroideries of silk, and with or without ornaments of wool and silk, or of cotton and silk, or of silk, for ladies and girls, net weight	do	3 80
	Elastic:		
86 (105)	Of wool and India rubber of more than 4 centimeters in width, gross weight	do	80
87 (114)	Braid, cord, and tape, of wool, with India rubber, which measure up to 4 centimeters in width, net weight	do	2 10
88 (90)	Felt of wool when a square meter weighs 350 grains and upward, net weight	do	25

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Wool—Continued.		
89 (92)	Fringe, galoon, passmenterie, edging (gimp), tape, cording and mesh of wool, with or without bugles of glass or metal not gold or silver, net weight	Kilogram	$3 20
90 (99)	Garters and suspenders of wool, with or without ornaments and buckles, legal weight	do	1 80
	Gloves of wool, of all sizes and colors:		
91 (93)	Unlined, net weight	do	4 50
92 (94)	Lined, net weight	do	2 60
93 (95)	*Gusanillo* (chenille) of wool, with or without metal, not gold or silver, net weight	do	3 20
94 (87)	Lace and wool net, and all manufactures of these materials, even when they have some adornment of silk and metal other than gold or silver, legal weight	do	8 00
	Rebozos (long shawls) of wool and those textures which are printed, embossed, or striped, with designs or work which imitate them (rebozos):		
95 (103)	Up to 26 threads of warp and woof in a square of one-half centimeter	Square meter.	1 45
96 (104)	Of more than 26 and up to 38 threads of warp and woof, in a square of one-half centimeter	do	2 20
97 (88)	Ruchings or flutings of wool muslin, with or without woolen lace and small ornaments of silk, legal weight	Kilogram	5 50
98 (108)	Sarapes of wool in imitation of those of Saltillo, worked or stamped	Square meter.	8 80
	Shawls of various sorts of wool, of all classes of textures not net:		
99 (100)	With or without embroideries of wool, and with or without fringe of wool, of silk and wool, or of silk and cotton, net weight	Kilogram	3 50
100 (101)	With trimmings, squares or embroideries (edges) of silk and fringe of any material, net weight	do	5 50
101 (81)	Socks, stockings, underdrawers and shirts of woolen stockinet, and all articles of stockinet of wool, or of worsted yarn, not specified, even when they have some trimmings of silk or metal other than gold or silver, net weight	do	2 20
102 (80)	Tassels of wool, even when their *almas* (inside) are of another material, net weight	do	1 30
103 (102)	Umbrellas, sunshades, and parasols	Each	1 00
104 (85)	Vests and jackets of woolen stockinet of all classes, net weight	Kilogram	1 40
	Wool:		
105 (97)	In the fleece, net weight	do	18
106 (98)	Carded, net weight	do	20
107 (107)	Woolen goods cut in dress patterns, of all classes of textures, excepting those specified, net weight	do	4 00
	Woolen goods of all textures, a square meter of which weighs—		
108 (109)	Up to 100 grams, net weight	do	2 75
109 (110)	More than 100 up to 250 grams, net weight	do	1 50
110 (111)	More than 250 up to 450 grams, net weight	do	3 00
11 (112)	More than 450 up to 600 grams, net weight	do	2 50
112 (113)	More than 600 grams and upwards, net weight	do	2 00
113 (89)	Yarn or thread of wool (Berlin wool), with or without a mixture of metal not gold or silver, net weight	do	1 90
114 (96)	Yarn of wool, of all colors, net weight	do	1 90
	Silk.		
115 (121)	Clothing, ready made, and their separate parts when they come sewed, of silk, with or without ornaments of any material, not specified, net weight	do	18 00
116 (124)	Goods and all kinds of articles of silk, not specified, even when they have embroideries or trimmings of any material, net weight	do	16 00
117 (116)	Handkerchiefs of silk, of all textures, with or without fringe even when there are other materials on their borders, net weight	do	9 00
	Rebozos (long shawls) of silk, and those textures which are printed, embossed, or striped, with designs or work that imitate them (rebozos):		
118 (118)	Up to 26 threads of warp and woof in a square of one-half centimeter, net weight	do	16 50
119 (119)	Of more than 26 and up to 38 threads of warp and woof in a square of one half centimeter, net weight	do	22 00
120 (120)	Of more than 38 and up to 64 threads of warp and woof in a square of one-half centimeter, net weight	do	34 10
121 (122)	Silk, raw, of all classes, net weight	do	2 00
122 (123)	Silk thread, sewing silk, buttonhole twist or floss silk, of all classes and colors, net weight	do	8 00
123 (115)	Socks, stockings, underdrawers, and undershirts, and all manufactures of silk stockinet not specified, net weight	do	16 00
124 (117)	Umbrellas, sunshades, or parasols of silk, or of silk with mixture of cotton, linen, or wool, of all classes	Each	1 75

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Silk with mixture of other materials.		
	Articles of silk with mixture of cotton, linen, or wool, of all classes and textures:		
125 (125)	With or without embroideries or trimmings of the same materials or of metal not gold or silver, excepting those specified, net weight	Kilogram	$9 00
126 (126)	With bugles or beads of glass or of metal, not gold or silver, excepting those specified, net weight	do	8 00
127 (127)	Articles of silk of all textures, with bugles or beads of glass or of metal not gold or silver, excepting those specified, net weight	do	12 00
128 (142)	Clothing, ready-made, and their separate parts when they come sewed, of all classes and textures, of silk with mixture of cotton, linen or wool with or without trimmings of any material, excepting that specified, net weight	do	12 00
	Cording of hemp:		
129 (130)	Covered with silk and cotton or silk and wool, net weight	do	2 80
130 (131)	Covered with silk, net weight	do	6 00
131 (132)	Corsets of silk with mixture of cotton, linen, or wool, of all sizes, net weight	do	3 80
132 (134)	Covers (linings) of silk with mixture of cotton, linen, or wool, sewed or in the pattern, for umbrellas, sunshades, and parasols, net weight	do	5 50
133 (141)	Elastic of silk and rubber, or of silk and rubber with mixture of cotton, linen or wool, of not more than 4 centimeters in width, gross weight	do	1 10
	Elastic braid, cord, or tape:		
134 (151)	Of cotton and silk or of wool and silk with india-rubber, measuring up to 4 centimeters in width, net weight	do	4 70
135 (152)	Of silk with india-rubber, measuring up to 4 centimeters in width, net weight	do	7 00
136 (144)	Goods, the warp and woof of which are cotton, linen, or wool, and having beside a mixture of silk in stripe, squares, flowers, or designs, and even when they have in small quantities a mixture of metal, not gold or silver, net weight	do	3 50
137 (145)	Goods of cotton, linen, or wool, when the warp or woof is of silk only, net weight	do	5 00
138 (146)	Goods of silk when in the warp or woof there is a mixture of cotton linen, or wool, net weight	do	7 50
139 (147)	Goods of silk and cotton, or of silk and wool with mixture of metal not gold or silver, net weight	do	5 60
140 (148)	Goods of silk with mixture of metal not gold or silver, net weight	do	6 60
141 (149)	Goods of silk and cotton, or of silk and wool with mixture of fine metal, net weight	do	10 00
142 (150)	Goods of silk with mixture of fine metal, net weight	do	16 00
143 (140)	Hairnets of silk with mixture of rubber, or of silk with cotton and rubber, net weight	do	4 40
144 (136)	Handkerchiefs of silk with mixture of cotton or wool, of all classes and textures, even when they have on their edges any mixture of metal, not gold or silver, net weight	do	5 50
	Rebozos (long shawls) and those textures which are printed, embossed or striped, with designs or work that imitate them (rebozos):		
145 (137)	Of silk with mixture of cotton, linen, or wool, up to 26 threads of warp and woof in a square of one-half centimeter, net weight	do	9 40
146 (138)	Of silk with mixture of cotton, linen, or wool, of more than 26 and up to 38 threads of warp and woof in a square of one-half centimeter, net weight	do	13 75
147 (139)	Of silk with mixture of cotton, linen, or wool, of more than 38 and up to 64 threads of warp and woof in a square of one-half centimeter, net weight	do	23 20
148 (135)	Rosettes of silk, or of silk and cotton, or silk and wool, with ornaments of metal, not gold or silver, net weight	do	5 00
149 (143)	Sarapes in imitation of those of Saltillo, marked or stamped, of wool with mixture of silk, net weight	do	13 40
150 (129)	Socks, stockings, underdrawers, and undershirts of silk stockinet with mixture of cotton, linen or wool, and all manufactures of this kind not specified, net weight	do	7 00
151 (128)	Tassels of silk and cotton, or silk and wool, even when their *almas* (inside) is of another material, net weight	do	2 80
152 (133)	Yarn or thread of wool and silk with or without metal, not gold or silver, net weight	do	3 00
	Nutritious substances.		
	Almonds, sweet or bitter:		
153 (159)	Without shell, net weight	do	25
154 (160)	With shell, net weight	do	12
	Beer and cider:		
155 (169)	In barrels, without allowance for leakage or drums, net weight	do	10

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Nutritious substances—Continued.		
156 (168)	Beer and cider, in bottles, without allowance for breakage or leakage, net weight	Kilogram	$0 20
157 (179)	Bitters, without allowance for leakage or breakage, net weight	do	30
	Brandy of all classes:		
158 (156)	In glass vessels, without allowance for leakage or breakage, net weight	do	50
159 (157)	In wooden vessels, without allowance for leakage or drums, net weight	do	40
160 (185)	Butter, net weight	do	25
161 (158)	Caraway seed and anise, net weight	do	10
162 (191)	Cheese of all classes, net weight	do	15
163 (172)	Chocolate, net weight	do	55
164 (179)	Cloves, net weight	do	65
165 (164)	Cocoa of all classes, net weight	do	16
166 (165)	Coffee, net weight	do	10
167 (173)	Confections of all classes, not specified, legal weight	do	1 00
168 (183)	Corn, gross weight	do	01
169 (178)	Crackers of all classes, gross weight	do	15
170 (166)	Cinnamon of all kinds, including cassia, net weight	do	1 00
171 (189)	Fish and cockles of all classes, dry, salt, smoked, pickled, or in brine, legal weight	do	12
172 (181)	Flour of other cereals, gross weight	do	01
	Fruits:		
173 (174)	In brine, gross weight	do	06
174 (175)	Dried, net weight	do	10
175 (176)	In their own juice, in sirup, and in brandy, legal weight	do	50
176 (177)	Fruits and vegetables, fresh, not specified, gross weight	do	01
177 (184)	Lard, net weight	do	20
178 (182)	Liquors of all classes, in glass or wooden vessels, without allowance for leakage, breakage, or drums, net weight	do	25
179 (186)	Molasses and honey, net weight	do	08
180 (161)	Oats, gross weight		01
	Olive oil:		
181 (153)	In jugs or tin cans, without allowance for leakage or breakage, net weight	Kilogram	15
182 (154)	In glass vessels, without allowance for leakage or breakage, net weight	do	20
183 (155)	Olives, stuffed (prepared) or in oil, legal weight	do	10
184 (167)	Onions, fresh, gross weight	do	03
185 (188)	Pastes, nutritious, gross weight	do	08
186 (190)	Pepper of all classes, net weight	do	25
187 (187)	Potatoes, gross weight	do	03
188 (171)	Preserves, pickles, mustard, and other prepared sauces, with the exception of those specified, legal weight	do	25
189 (192)	Salt, common or table, gross weight	do	03
190 (193)	Sardines in oil, tomatoes, or butter, legal weight	do	15
191 (163)	Sausages of all kinds, and smoked or salted meats, including ham, net weight	do	25
192 (162)	Sugar, common or refined, gross weight	do	15
193 (194)	Tea, green or black, of all classes, net weight	do	50
	Vinegar:		
194 (196)	In wooden vessels, without allowance for leakage or breakage, net weight	do	06
195 (197)	In glass vessels, without allowance for leakage or breakage, net weight	do	11
196 (180)	Wheat flour of all classes, net weight	do	11
197 (195)	Wheat and all kinds of grain and seeds not specified, gross weight	do	05
	Wine, red and white:		
198 (198)	In wooden vessels, without allowance for leakage or drums, net weight	do	12
199 (199)	In glass vessels, without allowance for leakage and breakage, net weight	do	20
	Stone, earthen, crystal, and crockery ware.		
200 (213)	Beads (strings of common glass beads) and imitation pearls, gross weight	Kilogram	1 25
201 (210)	Bottles of common glass for bottling wines, liquors, &c., and demijohns, without allowance for breakage, gross weight	do	08
202 (208)	Bricks, not refractory	Thousand	1 80
203 (211)	Crystal and ground glass, in pieces of all forms, classes, and sizes, including toys, without allowance for breakage, gross weight	Kilogram	20
204 (212)	Crystal, cut, imitating fine stones, gross weight	do	1 30
205 (218)	Crystals for spectacles and watches, gross weight	do	45
206 (216)	Earthen and china ware, made in pieces of all forms, classes, and sizes, including toys, without allowance for breakage, gross weight	do	15
207 (209)	Gypsum, gross weight	do	10

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Stone, earthen, crystal, and crockery ware—Continued.		
208 (200)	Manufactures of alabaster, marble, or stucco, not specified, gross weight	Kilogram	$0 20
209 (201)	Manufactures of gypsum or clay, not specified, gross weight	do	15
210 (204)	Marble and alabaster, in bulk or flags for floors, which measure up to 40 centimeters square, and smoothed only on one side, gross weight	do	01
	Mirrors with or without frames:		
211 (214)	Up to 30 centimenters on a side, without allowance for breakage, gross weight	do	25
212 (215)	Of more than 30 centimeters on one of their sides, even when the others are less in size, without allowance for breakage, gross weight	do	45
213 (205)	Mosaic work of stone for pavements, gross weight	do	01
214 (208)	Slates and slate pencils, of any material, or their imitations, with or without frames, for writing and drawing, gross weight	do	10
215 (206)	Stones for sharpening, or grindstones, gross weight	do	04
216 (202)	Tile	Thousand	7 25
217 (207)	Whetstones and flint-stones, gross weight	Kilogram	05
218 (217)	Window glasses, whether corrugated or otherwise, without allowance for breakage, gross weight	do	25
	Metals and their manufactures.		
	GOLD, SILVER, AND PLATINA.		
21 (224)	Gold, beaten in leaves, legal weight	Kilogram	15 00
220 (220)	Jewelry and all classes of works of gold or platina, or of both metals, with pearls or precious stones, net weight.	Hectogram	5 0
	Jewelry and all kinds of works:		
221 (221)	Of gold or platina or of both metals, without pearls or precious stones, net weight	do	4 00
	Of silver or of silver and gold:		
222 (222)	With pearls or precious stones, net weight	do	3 50
223 (223)	Without pearls or precious stones, net weight	do	2 50
224 (219)	Wire, hollow wire, and other drawn wire goods of silver, gilded or ungilded, net weight	Kilogram	10 00
	IRON AND STEEL.		
225 (246)	Beams, iron, for roofs, provided they cannot be used for any other object in which iron is employed, gross weight	do	01
226 (233)	Chains of iron, the links of which have a diameter not to exceed No. 5, Birmingham measure, gross weight	do	10
227 (242)	Furniture of iron of all classes, with or without marble tops and mirrors, gross weight	do	20
228 (226)	Iron in pigs, filings, or small pieces, gross weight	do	01
229 (227)	Iron in bulk, round bars, plates, large hammers, unwrought pieces of all sizes, and anvils, gross weight	do	05
230 (238)	Iron in sheets, beaten, wrought, cast, including axles, boxes (for wheels), and springs for carriages, gross weight	do	10
231 (239)	Iron corrugated and in tiles, for roofs, gross weight	do	14
232 (231)	Manufactures of iron, steel, or tin, of all classes not specified, gross weight	do	20
233 (232)	Manufactures of iron or steel only, the weight of which exceeds 20 kilograms, gross weight	do	10
234 (234)	Masks of iron or steel wire, of all classes	Each	45
235 (235)	Nails, brads, screws, bolts, and rivets, of iron, gross weight	Kilogram	10
236 (236)	Needles which do not exceed 5 centimeters in length, gross weight	do	95
237 (237)	Needles which exceed 5 centimeters in length, gross weight	do	35
238 (243)	Pens of steel or other metal not gold or silver	do	95
	Scissors, wrought:		
239 (244)	Up to 14 centimeters, gross weight	do	95
240 (245)	Of more than 14 centimeters, gross weight	do	30
241 (225)	Steel in bulk, excepting bars for mines, net weight	do	05
242 (241)	Tin in sheets of more than 40 centimeters in length and 30 in width and stamped, painted, or japanned, of all dimensions, gross weight	do	07
243 (240)	Tools and instruments of iron, steel, brass, or wood, or composed of these materials, for artisans, gross weight	do	10
	Wire, of steel or iron:		
244 (228)	From No. 26 upward, Birmingham measure, gross weight	do	01
245 (229)	Galvanized or not, excepting those specified, gross weight	do	10
246 (230)	Covered with cotton, gross weight	do	15
	COPPER AND ITS ALLOYS.		
247 (257)	Beads, large or small, of copper or of any other alloy of common metal, gross weight	do	1 [illegible]
	Copper:		
248 (254)	In pigs or granulated, gross weight	do	10
249 (255)	In plates or sheets, gross weight	do	15
250 (256)	Beaten in leaves, gilded or plated, gross weight	do	45

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Metals and their manufactures—Continued.		
	COPPER AND ITS ALLOYS—continued.		
251 (258)	Furniture of brass of all classes, with or without marble tops or mirrors, gross weight	Kilogram	$0 30
252 (257)	Lead, in bulk, in blocks or sheets, and in munition, gross weight	do	05
253 (250)	Manufactures of copper, brass, and bronze of all classes, not specified, gross weight	do	30
	Manufactures of copper, brass, or any other common metal:		
254 (251)	Gilded or plated, gross weight	do	1 30
255 (252)	Nickel-plated, not specified, gross weight	do	70
256 (261)	Manufactures of zinc, of all classes, gross weight	do	20
257 (262)	Manufactures of plaque, gross weight	do	1 25
258 (263)	Manufactures of pewter or white metal, gross weight	do	40
59 (266)	Plaque or German silver, in sheets, gross weight	do	20
260 (253)	Powders of any metal for bronzing, gross weight	do	1 30
261 (264)	Tin, block tin and in grain, gross weight	do	10
262 (265)	Tin in sheets, leaves, and other manufactures not specified, gross weight	do	20
263 (247)	Wire of copper or brass, gross weight	do	30
264 (248)	Wire of copper or brass covered with cotton, silk, or other material, gross weight	do	40
	Wire, hollow wire, and other drawn wire goods:		
265 (249)	Of metal, gilded or plated, gross weight	do	2 50
266 (258)	Of yellow metal, not gilded or plated, gross weight	do	1 50
267 (260)	Wire of white metal, not plated, from number 20 upward, Birmingham measure, gross weight	do	1 00
263 (308)	Zinc in sheets, gross weight	do	07
	Notions.		
269 (324)	Bags, game, of all classes and sizes, gross weight	do	50
270 (301)	Bellows, hand, for fireplaces, pianos, or other uses, gross weight	do	30
271 (283)	Belts of all classes not specified, the buckles of which are not of gold or silver, gross weight	do	50
272 (284)	Belts of silk or of any other material mixed with silk, with or without buckles, not of gold or silver, gross weight	do	2 00
273 (275)	Billiard balls of ivory, gross weight	do	4 00
274 (325)	Billiard cues and their points, gross weight	do	50
275 (274)	Blacking and polish in paste or in liquids for boots, shoes, and harness, gross weight	do	20
276 (311)	Books or note books of slate, gross weight	do	50
277 (282)	Bristles for shoemakers, gross weight	do	10
2 8 (278)	Brushes and pencils for painters, of all classes, gross weight	do	20
279 (277)	Buttons covered or crocheted of any material not containing silk, gross weight	do	30
280 (276)	Buttons of silk, or of silk with mixture of cotton or wool, covered or crocheted, gross weight	do	50
281 (272)	Canes of all classes, the heads of which are not of gold or silver, gross weight	do	25
282 (273)	Cane for furniture, gross weight	do	10
283 (297)	Cases and work-boxes (for scissors, spools, &c.) of all classes with or without trimmings and ornaments, not gold or silver, gross weight	do	1 10
2 4 (288)	Chalk (cosmetic) for billiard cues, gross weight	do	30
2 5 (280)	Coral, manufactured or unmanufactured, gross weight	do	3 00
286 (287)	Curtains, transparent, painted in oil or distemper, gross weight	do	35
287 (321)	Feather dusters, gross weight	do	32
288 (320)	Feathers for quill pens and for pillows and cushions, gross weight	do	50
289 (295)	Fireworks, Chinese, gross weight	do	68
290 (300)	Flasks of metal or glass incased in leather, cane, or gutta-percha, gross weight	do	30
291 (293)	Frames for umbrellas, sunshades, and parasols, gross weight	do	65
292 (326)	Horsehair cloth of all classes and colors, gross weight	do	35
293 (327)	Ink for writing, in ordinary vessels, net weight	do	25
294 (313)	Ivory in bulk or in sheets, gross weight	do	30
295 (328)	Lamp shades with or without frames, gross weight	do	65
296 (298)	Lanterns of all classes, gross weight	do	30
297 (280)	Masks of all classes, not of wire	Each	25
298 (299)	Matches of wood, wax, tinder, or phosphoric pasteboard, gross weight	Kilogram	1 25
299 (295)	Mats of hemp, cocoa, tow, or Chinese mats, gross weight	do	30
300 (316)	Measures of length and capacity, of all classes, gross weight	do	30
301 (.03)	Musical instruments, of all classes and materials, including inner works set up, and the keys for pianos, gross weight	do	45
302 (290)	Oil-cloth for table or floor, gross weight	do	30
303 (279)	Paints in boxes, of all classes, gross weight	do	25
	Pen-holders:		
304 (322)	Not of gold or silver, gross weight	do	30
305 (.08)	Not of gold or silver and the points for the same, gross weight	do	65
306 (309)	Pencils, lead, of all classes, gross weight	do	10

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Notions—Continued.		
307 (293)	Pencil-sharpeners for slate pencils, gross weight	Kilogram	$0 08
308 (294)	Prints, paintings, engravings, and lithographs of all classes, with or without frames, which are not covered with cloth or leather, gross weight	do	65
309 (302)	Rubber for erasing and mucilage for writing desks, gross weight	do	30
310 (319)	Sand-paper or emery-cloth, gross weight	do	06
311 (304)	Scientific instruments, gross weight	do	01
312 (281)	Sieves and strainers of hair or leather, gross weight	do	20
313 (269)	Spectacle glasses and lenses set in any material other than gold or silver, gross weight	do	1 25
314 (270)	Spectacle glasses, unmounted, classed as numbers 6 and 8, and ordinary lenses of one glass, marked with the numbers 1, 2, and 3, gross weight	do	30
	Sponge:		
315 (291)	Fine, gross weight	do	1 50
316 (292)	Ordinary, gross weight	do	30
317 (296)	Stereoscopes of all classes, gross weight	do	65
318 (289)	Strings of all materials for musical instruments, gross weight	do	45
319 (271)	Straps of all classes for razors and pastes for this purpose, gross weight	do	45
320 (305)	Tackle and cordage of all classes, gross weight	do	13
321 (314)	Tapers (small night lights), gross weight	do	30
322 (318)	Tinsel (leaf brass) and enamel in leaf or pricked, gross weight	do	95
323 (312)	Tooth-picks of all classes, not gold or silver, gross weight	do	30
324 (306)	Toys of all classes and materials, excepting those specified, gross weight	do	45
325 (317)	Wafers of all classes, gross weight	do	75
326 (307)	Wax, sealing, gross weight	do	95
327 (310)	Whips of all classes not having gold or silver butts, gross weight	do	65
328 (315)	Wicks of cotton for lamps and for pocket flint and steel, gross weight	do	30
	Machines and apparatus.		
329 (329)	Apparatus of silk and other materials, not of gum-elastic or gutta-percha, for use in medicine and surgery, legal weight	do	1 00
	Clocks for table or wall:		
330 (332)	With wooden cases, gross weight	do	45
331 (333)	Not specified, nor of gold or silver, gross weight	do	1 25
332 (331)	Hand-mills for all purposes, gross weight	do	15
333 (330)	Sewing-machines, of all classes and their separate parts or pieces for repairs, gross weight	do	05
	Watches:		
334 (336)	Of all classes of metal or other material, not specified	Each	50
	Of gold with or without precious stones:		
335 (334)	Striking	do	14 00
336 (335)	Not striking	do	6 75
	Of silver:		
337 (336)	Striking	do	5 00
338 (337)	Not striking	do	1 30
	Carriages, &c.		
	Carriages of all classes that weigh—		
339 (341)	Up to 100 kilograms, excepting those specified, gross weight	Kilogram	60
340 (342)	More than 100 up to 250 kilograms, net weight	do	55
341 (343)	More than 250 up to 500 kilograms, net weight	do	50
342 (344)	More than 500 up to 750 kilograms, net weight	do	45
343 (345)	More than 750 up to 1,000 kilograms, net weight	do	40
344 (346)	More than 1,000 kilograms, net weight	do	35
345 (347)	Carriages, small, for children, of all classes, net weight	do	30
346 (340)	Carts (two wheels), wagons (four wheels), of all dimensions, gross weight	do	06
347 (348)	Diligences and omnibuses of all classes, net weight	do	10
348 (350)	Shafts (front running gear) for carriages, gross weight	do	60
349 (353)	Velocipedes, gross weight	do	20
350 (349)	Wagons (guayines) of all classes and sizes, net weight	do	20
	Wheels, separate:		
351 (352)	For carriages, gross weight	do	60
352 (351)	For wagons (carts) of all dimensions, gross weight	do	15
353 (339)	Wheelbarrows of one or two wheels and hand-carts, gross weight	do	01
	Arms, powder, and munitions.		
354 (356)	Cartridges, loaded or not, for fire-arms, gross weight	do	50
	Fire-arms:		
355 (356)	Repeating or breech-loading, of all classes, and their extra pieces, gross weight	do	1 25
356 (357)	Not repeating or breech-loading, of all classes, and their extra pieces, gross weight	do	82

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Arms, powder, and munitions—Continued.		
357 (360)	Foils, with or without hilt, gross weight	Kilogram	$0 50
358 (363)	Pistols, guns, and shooting-canes, of air, of all classes, gross weight	do	70
359 (362)	Powder, not for mines, gross weight	do	1 00
360 (359)	Primers and percussion caps of all kinds of fulminants, not specified, gross weight	do	45
	Side-arms:		
361 (354)	Without gilded hilt, sheath, or sheath-bands, gross weight	do	25
362 (355)	With hilt, sheath, and sheath-bands, gilded or plated, gross weight	do	1 00
363 (361)	Sword-blades, gross weight	do	45
	Wood and its manufactures.		
364 (307)	Box wood, gross weight	Kilogram	01
365 (374)	Corks, plugs, or bungs of wood, gross weight	do	06
366 (309)	Frames and moldings, gilded or not gilded, gross weight	do	45
	Furniture:		
367 (371)	Of all classes of ordinary wood, painted or varnished or not, including furniture of cane or bent wood, with or without marble top or mirrors, gross weight	do	15
368 (372)	Of all classes of fine wood, veneered or solid, and that covered with skin or any goods not containing silk, and with or without marble top or mirrors, gross weight	do	25
369 (373)	Of all classes and materials with inlaid works or ornaments of shell, ivory, tortoise-shell, or metal not gold or silver, and that covered with cloth of silk or cloth containing silk, and with or without marble tops or mirrors, gross weight	do	35
370 (306)	Handles and helves of wood for tools and other purposes, gross weight	do	10
371 (370)	Hubs, posts, and spokes of wood, for carriages, gross weight	do	06
372 (304)	Manufactures of wood not specified, gross weight	do	30
373 (305)	Pails of wood, gross weight	do	10
374 (308)	Wood, fine, sawed in pieces, beams, boards, or planks, gross weight	do	02
	Paper, pasteboard, and their applications.		
375 (375)	Albums, with or without photographs, with covers and ornaments of all materials not gold or silver, gross weight	Kilograms	1 10
376 (385)	Books and printed music with covers of pasteboard, cloth or leather, gross weight	do	03
377 (384)	Books, bound in velvet, shell, ivory, tortoise shell, gutta-percha, wood, composition, or metal, not gold or silver, gross weight	do	1 20
378 (383)	Books, blank or ruled, with ordinary binding, gross weight	do	25
379 (387)	Brown paper and wrapping paper, gross weight	do	08
380 (379)	Charts, geographical, topographical, and nautical, gross weight	do	01
381 (382)	Documents (forms) of all classes, printed, engraved or lithographed, with spaces for writing on them, gross weight	do	65
382 (378)	Lithographed notices or advertisements on paper or pasteboard, with or without colors, without frames, gross weight	do	20
383 (376)	Manufactures or works of paper or pasteboard, of all classes, not specified, gross weight	do	45
	Paper:		
384 (390)	Engraved or lithographed for envelopes or tickets, gross weight	do	65
385 (392)	Of all classes and colors, not specified, gross weight	do	20
386 (391)	Pitched, tarred, cloth-lined, and impermeable, gross weight	do	07
387 (388)	Sized or unsized, of all classes, excepting that specified, gross weight	do	10
388 (389)	Writing paper of good quality or cheaper grade (*florete o medio florete*) for accounts and letters, of all classes, and that for cigarettes, gross weight	do	32
	Pasteboard:		
389 (380)	Of all thicknesses, beaten or not, excepting that specified, gross weight	do	20
390 (381)	In large sheets, medium sheets, bristol-board, albumenized and porcelain paper and that used for making playing cards, gross weight	do	48
391 (386)	Playing cards of all classes, gross weight	do	1 05
392 (377)	Printed notices (advertisements) without frames, gross weight	do	01
	Skins, &c.		
393 (396)	Bands (belting) of leather, when they do not come attached to any machinery forming a part of it, gross weight	Kilogram	50
394 (409)	Buckles (clasps) covered with leather, gross weight	do	25
395 (398)	Boots and half-boots, of heavy leather	Pair	1 50
396 (399)	Boots and half-boots, of calf-skin or patent leather	do	2 50
397 (397)	Calf-skins, patent leather, kid, chamois, and other prepared skins, net weight	Kilogram	1 55

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Skins, &c.—Continued.		
	Gaiters:		
398 (400)	Of leather or cloth, other than silk, with or without elastic and ornaments	Pair	$ 90
399 (401)	Of silk, with or without elastic and ornaments	do	1 25
400 (405)	Gloves, plastrons, and leggings, for fencing	Piece	30
	Gloves of skin, of all sizes, plain or embroidered:		
401 (406)	Unlined, legal weight	Kilogram.	4 50
402 (407)	Lined, legal weight	do	2 75
403 (408)	Harnesses for carriages, gross weight	do	1 50
404 (394)	Leather, manufactures of, not specified, gross weight	do	60
405 (410)	Manufactures of skins (furs), such as muffiers, wristlets, muffs, and other ornaments not specified, net weight	do	2 20
406 (398)	Saddles of all classes, with or without ornaments not of gold or silver, net weight	do	2 00
407 (402)	Sandals, hempen, called "alpargatas"	Pair	2 00
	Shoes, low:		
408 (413)	Of leather or material other than silk, with or without ornaments	do	45
409 (414)	Of silk, with or without ornaments	do	80
410 (411)	Skins (fur) of all classes, unprepared, net weight	do	10
411 (395)	Slippers or low shoes of leather or other material which do not contain silk or metal	do	40
412 (404)	Uppers for gaiters, unsoled, of leather or cloth, other than silk, with or without ornaments, net weight	do	3 30
413 (403)	Uppers for slippers, of leather or cloth which do not contain silk or metal, net weight	do	75
414 (412)	Visors of leather, gross weight	Kilogram	30
	Drugs, medicines, and chemicals.		
415 (423)	Acetates of all classes, not specified, legal weight	Kilogram	30
416 (422)	Acetates of lead, copper, alumina, and iron, legal weight	do	08
417 (425)	Acid, acetic, nitric, oxalic, and pyroligneous, legal weight	do	05
	Acids:		
418 (426)	Of all substances, gaseous or liquid, not specified, legal weight	do	20
419 (427)	In crystals or in powder, not specified, legal weight	do	1 00
420 (429)	Alcohol or spirits of wine, net weight	do	70
421 (431)	Alkaloids and their salts, not specified, legal weight	do	15 00
422 (424)	Aloes, socotrine, legal weight	do	30
423 (438)	Ambergris, legal weight	do	16 00
424 (440)	Antimony, metallic, net weight	do	20
425 (442)	Arsenic, metallic, net weight	do	30
	Balsams:		
426 (447)	Compounded, not specified, legal weight	do	1 65
427 (446)	Natural or liquid, legal weight	do	1 10
428 (466)	Barks, flowers, herbs, leaves, fruits, seeds, and roots, medicinal, gross weight	do	20
429 (449)	Bicarbonate of potash or of soda, legal weight	do	05
430 (432)	Camphor, legal weight	do	50
431 (452)	Cantharides (Spanish flies), net weight	do	2 00
432 (453)	Capsules and pearls, medicinal, of all substances, legal weight	do	1 00
433 (454)	Capsules, empty, for medicinal purposes, net weight	Kilogram	80
434 (455)	Carbonate of potash, gross weight	do	05
435 (456)	Castoreum, legal weight	do	4 00
436 (457)	Catechu or cutch, gross weight	do	10
437 (459)	Chloral, hydrate, legal weight	do	1 50
438 (460)	Chlorate of potash and of soda, legal weight	do	08
439 (462)	Chloride of gold, legal weight	do	25 00
440 (461)	Chloroform, legal weight	do	1 50
441 (465)	Colors, crude or prepared, gross weight	do	10
442 (464)	Collodion and its compounds, legal weight	do	1 00
443 (468)	Creosote, legal weight	do	1 00
444 (458)	Cyanide of potash (common), legal weight	do	08
445 (469)	Drugs, medicines, and chemicals not specified, legal weight	do	75
446 (433)	Dye woods, in wood or powder, gross weight	do	05
447 (470)	Elixirs, medicinal, of all substances, legal weight	do	1 00
448 (471)	Essence or extract of sarsaparilla of whatever compounds, legal weight	do	30
449 (472)	Ether of all substances, legal weight	do	20
450 (474)	Extract of logwood, of Brazil wood, and all dye woods, gross weight	do	05
451 (473)	Extracts of all substances for medicinal purposes, legal weight	do	3 00
452 (475)	Fecula of all materials and dextrine, net weight	do	10
453 (417)	Fish oil of all classes and cod liver oil, pure or prepared in any form, legal weight	do	10
454 (419)	Fixed oils, not specified, legal weight	do	50
455 (463)	Glues and albumens, gross weight	do	10
456 (477)	Gum dammar, gum lac, senegal gum, sandarac gum, and tragacanth gum, gross weight	do	10

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Drugs, medicines, and chemicals—Continued.		
457 (478)	Gums, resins, and bitumens of all classes, including the gum of benzoes, excepting those specified, gross weight	Kilogram	$0 20
458 (441)	Indigo of all classes, gross weight	do	1 35
459 (505)	Iodides of all substances, gross weight	do	2 00
460 (504)	Iodides of potash, gross weight	do	1 00
461 (508)	Iodine, pure, gross weight	do	1 50
462 (502)	Iodoform, gross weight	do	8 00
463 (434)	Lavender, gross weight	do	06
464 (418)	Linseed oil, nut and castor oil (higuerilla), net weight	do	25
465 (439)	Liquid ammonia and all the salts of ammonia, gross weight	do	01
466 (481)	Liquid ambar, net weight	do	45
467 (482)	Litharge and oxide of lead, net weight	do	15
468 (450)	Medicine chests with flasks, full or empty, net weight	do	45
469 (484)	Metals and metalloids for medicinal purposes, not specified, net weight	do	1 50
470 (416)	Mineral oils, not purified, gross weight	do	01
471 (415)	Mineral oils, purified, net weight	do	10
472 (436)	Musk, legal weight	do	10 00
473 (485)	Naphthaline, legal weight	do	1 80
474 (496)	Nitrate of silver, legal weight	do	8 00
475 (420)	Oils, essential, of orange flowers, geranium, nutmeg, mustard, patchouly, and rose, legal weight	do	5 00
476 (421)	Oils, volatile or essential, not specified, legal weight	do	2 50
477 (487)	Opium, gross weight	do	2 20
478 (488)	Orchil, gross weight	do	05
479 (490)	Paste, lozenges, and jellies, medicinal, of all substances, legal weight	do	20
480 (491)	Pepsin, legal weight	do	3 00
481 (476)	Phosphorus, clear or red, legal weight	do	75
482 (492)	Pills, grains, dragees, comfits, and granules of all substances, legal weight	do	65
483 (494)	Powders, medicinal, of all substances and makes, legal weight	do	33
484 (495)	Prussiate of potash, legal weight	do	08
485 (498)	Pyrolignite of iron and lead, legal weight	do	08
486 (489)	Quinine and its salts, net weight	do	1 00
487 (444)	Rock candy or sugar of milk, gross weight	do	35
488 (443)	Saffron, dry or in oil, net weight	do	4 00
489 (497)	Salicene, net weight	do	1 00
490 (496)	Salts and sulphates of all substances not specified, legal weight	do	15
491 (480)	Sirups, medicinal, of all substances, gross weight	do	50
492 (479)	Soaps, medicinal, including cocoa soap, gross weight	do	30
493 (430)	Spirits of turpentine, gross weight	do	10
494 (435)	Starch, gross weight	do	08
495 (445)	Sulphur, gross weight	do	01
496 (498)	Sulfo-oleina, gross weight	do	07
497 (437)	Tar and pitch (resin), gross weight	do	04
498 (407)	Tartar, cream of, legal weight	do	10
499 (499)	Tartar, crude, legal weight	do	08
500 (451)	Test cases with chemical reactives, gross weight	do	3 30
501 (500)	Valerianates of all substances, legal weight	do	6 00
502 (448)	Varnishes of all classes, legal weight	do	18
503 (428)	Waters (aromatic), compounded, distilled, or alcoholic, for toilet or medicinal uses, legal weight	do	50
504 (429)	Waters, mineral, natural or artificial, legal weight	do	10
505 (501)	Wines, medicinal, of all substances, net weight	do	25
	Different articles.		
506 (509)	Animals of all classes, prepared for cabinets of natural history, gross weight	do	01
507 (517)	Bands of rubber that do not come united to machinery, forming a part of it, gross weight	do	10
508 (556)	Beaver fur of all classes, net weight	do	3 00
509 (550)	Billiard tables of all materials, not including the cloth, gross weight	do	30
510 (526)	Blubber of sperm whale, gross weight	do	01
511 (532)	Broom corn or guinea corn, gross weight	do	08
512 (530)	Brooms of heather, of all classes and sizes, gross weight	do	15
513 (551)	Cabinets of coins of all classes, gross weight	do	01
514 (574)	Candles, stearine, and of pressed or unpressed tallow, gross weight	do	15
515 (575)	Candles of all classes not specified, gross weight	do	60
516 (519)	Caps of all classes and materials, with or without visors and ornaments, net weight	do	3 75
517 (524)	Collections, mineralogical, geological, and of al libranches of natural history, for muesums and cabinets, gross weight	do	01
518 (571)	Cork stoppers, net weight	do	20
519 (529)	Covers of straw for bottles, gross weight	do	08
	Cushions, mattresses and pillows:		
520 (422)	Of all materials other than silk, gross weight	do	50
521 (523)	Of silk or material containing silk, gross weight	do	3 00

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Different articles—Continued.		
502 (502)	Designs, models, molds, and patterns for the arts, gross weight	Kilogram	$0 01
503 (506)	Fans, ordinary, of straw, pasteboard, or linen, without sticks, gross weight	do	20
	Fans:		
504 (507)	With sticks of wood, bone, horn, and all those not specified, gross weight	do	95
505 (508)	With sticks of shell, ivory, or tortoise shell, with or without ornaments	Each	2 50
506 (534)	Felt for hat frames, net weight	Kilogram	2 20
	Flowers, artificial, and feathers for ornaments:		
507 (535)	Of all materials not silk, metal, glass, or porcelain, legal weight	do	3 00
508 (536)	Of silk, or of silk when mixed with other material, legal weight	do	7 00
509 (510)	Frames of cotton goods for bonnets and hats for women and girls, gross weight	do	25
	Galloons and braids:		
510 (538)	Of plated or gilded metals, up to 15 centimeters in width, gross weight	do	2 50
511 (539)	Of yellow metal, not gilded, up to 15 centimeters in width, gross weight	do	1 50
512 (540)	Of silver, pure or alloyed, net weight	do	18 20
513 (541)	Of silver, gilded, pure or alloyed, net weight	do	15 40
514 (518)	Geldings	Each	40 00
515 (542)	Grease, animal, not specified, gross weight	Kilogram	07
516 (558)	Hair, human, manufactured or unmanufactured, net weight	do	10 00
517 (560)	Hats, of all classes not specified, with trimmings, and with or without ornaments of any material	Each	1 00
518 (561)	Hats, of all classes and materials, in patterns (blocked out), and without trimmings	do	50
519 (562)	Hats, of Spanish grass, with or without trimmings, for children	do	20
520 (543)	Ice, gross weight	Kilogram	01
521 (537)	Linings (coverings) and foundations, of whatever material, for hats, net weight	do	2 00
522 (513)	Manufactures of amber, sea-foam, jet, agate, tortoise shell, ivory, or shell, not specified, gross weight	do	1 30
523 (515)	Manufactures of all materials with adornments and accessories of gold, silver, or platina, not specified, gross weight	do	3 60
524 (516)	Manufactures of all classes for artificial flowers, not specified, gross weight	do	1 70
525 (511)	Manufactures of bone, horn, whalebone, gutta-percha, or celluloid, not specified, gross weight	do	30
526 (514)	Manufactures of cane, reed, straw, pasteboard, or any other analogous material, covered (lined) with cloth or skin, of all classes, with ornaments of metal, not gold or silver, excepting those specified, gross weight	do	1 20
527 (512)	Manufactures of straw or reed, gross weight	do	45
528 (559)	Perfumery, not specified, gross weight	do	95
529 (572)	Rubber cloth, suitable for making articles of dress, or for any other analogous use, gross weight	do	80
530 (545)	Rubber for foot wear, all sizes, and in strips for cushions for billiard tables and spun into threads, gross weight	do	48
531 (544)	Rubber, india, in sheets, when it does not come attached to any machinery in convenient form for being used upon it, gross weight	do	10
532 (546)	Rubber in articles of dress, of all forms and sizes, gross weight	do	1 60
533 (547)	Rubber prepared for dentists, gross weight	do	2 00
534 (553)	Sacerdotal ornaments of silk, or silk with a mixture of cotton or wool, with or without embroideries of metal and galloon, not gold or silver, net weight	do	4 75
535 (554)	Sacerdotal ornaments of silk with mixture of cotton or wool, with embroideries of metal and galloon of silver or plated silver, net weight	do	8 50
536 (555)	Sacerdotal ornaments of silk, with or without embroideries of metal and galloon of silver or plated silver, net weight	do	16 00
537 (557)	Skin of the vicugna, rabbit, hare, or other similar, net weight	do	1 60
	Soap:		
538 (548)	Common, not perfumed, gross weight	do	18
539 (549)	Fine, with or without perfume, gross weight	do	1 25
540 (531)	Sperm, in cakes, net weight	do	40
541 (525)	Statues and busts of all classes and materials, of natural size or larger dimensions, gross weight	do	10
542 (533)	Stearine in cakes, net weight	do	14
543 (527)	Teeth, artificial, of all materials, net weight	do	3 00
544 (573)	Tents of all classes, not including the wooden posts for setting them up, gross weight	do	20
	Tobacco:		
545 (564)	Fine-cut, net weight	do	1 10
546 (565)	In powder or snuff, in flasks or bottles, without allowance for leakage or breakage, legal weight	do	2 75
547 (566)	In the leaf, not Virginia, net weight	do	1 37

Mexican tariff—Continued.

Numbers.	Articles.	Weight, measure, or number.	Rate of duty.
	Different articles—Continued.		
	Tobacco:		
568 (568)	Made into cigarettes of all classes, legal weight	Kilogram	$1 87
569 (569)	Made into cigars, net weight	do	5 40
570 (563)	Plug for chewing, net weight	do	68
571 (570)	Smoking, net weight	do	1 87
572 (567)	Virginia, in the leaf, net weight	do	18
573 (520)	Tubing of rubber or gutta-percha of all dimensions, gross weight	do	10
574 (521)	Wax of all classes, net weight	do	50
575 (552)	Work partly or wholly finished on canvas of all classes, not specified, net weight	do	75

NEWFOUNDLAND TARIFF, 1887.

TRANSMITTED BY CONSUL MOLLOY.

TABLE OF DUTIES.

Ale, porter, cider and perry	per gallon	$0 20
Animals, viz:		
Calves, pigs, and sheep	each	30
Horses, mares, &c	do	3 00
Apples	per barrel	40
Apples (dried)	per pound	02
Bacon, hams, tongues, smoked beef, and sausages	per cwt	2 50
Beef, pigs' heads, feet, and hocks, salted and cured	per barrel of 200 pounds	1 00
Biscuit and bread (not including sweet or fancy biscuits)	per cwt	20
Butter, oleomargarine, and other compounds representing butter	do	2 00
Casks, empty, second hand, 45 gallons and under	each	45
Casks, empty, second hand, over 45 gallons	do	1 45
Cask staves, second hand, manufactured, capable of making casks of 45 gallons and upwards	per 100	5 75
Cask staves, second hand, manufactured, capable of making casks under 45 gallons	do	1 40
Cheese	per cwt	2 50
Chocolate and cocoa	per pound	06
Cigars, 10 per cent. ad valorem	per M	4 00
Coffee, green	per pound	05
Coffee, roasted or ground	do	07
Coals, imported or brought into the ports of St. John's, Harbor Grace, and Carbonear	per ton	30
Confectionery, not including confectioners' ornaments	per cwt	5 50
Feathers and feather beds	per pound	07
Fish, viz: Codfish and haddock, save as hereinafter exempt	per quintal of 112 lbs	1 50
Flour	per barrel	30
Fruit, dried (excepting dried apples), currants, raisins, &c	per pound	03
Indian meal	per barrel	25
Jams and preserves, 20 per cent ad valorem	per pound	03
Lumber, 1 inch thick, and so in proportion for any greater thickness	per M	2 50
Oats	per bushel	05
Lumber, grooved, tongued, or planed, 1 inch thick, and so in proportion for any greater thickness	per M	4 00
Molasses	per gallon	07
Oatmeal	per barrel of 200 pounds	30
Oil, kerosene	per gallon	06
Peas	per barrel	30
Pork	per barrel of 200 pounds	1 75
Salt, in bulk	per ton	20
Shingles and laths	per M	60
Spirits, viz:		
Brandy and other spirits, not herein defined or enumerated, and not exceeding the strength of proof by Sykes's hydrometer, and so in proportion for any greater strength than the strength of proof	per gallon	2 40
All other spirits of greater strength than 43 per cent. overproof shall be deemed to be undefined spirits, and be subject to duty accordingly	per gallon	2 40
Rum, not exceeding the strength of proof by Sykes' hydrometer, and so in proportion for any greater strength than the strength of proof	per gallon	1 65
Gin, not exceeding the strength of proof by Sykes' hydrometer, and so in proportion for any greater strength than the strength of proof	per gallon	1 80
Whisky, not exceeding the strength of proof by Sykes' hydrometer, and so in proportion for any greater strength than the strength of proof	per gallon	2 15
Cordials, shrub and other spirits, being sweetened or mixed so that the degree of strength cannot be ascertained	per gallon	1 15
Sugars, viz:		
Bastard	per cwt	3 50
Loaf and refined	do	4 50
Unrefined	do	3 00

Tea, 20 per cent. ad valorem	per pound..	$0 06
Timber, including lignum-vitæ	per ton..	60
Tobacco:		
Manufactured, including leaf tobacco, stripped or partly manufactured, 5 per cent. ad valorem	per pound..	20
Leaf and stems	do....	20
Stems, for snuff	per cwt..	60
Vegetables, viz:		
Cabbages	per hundred..	2 00
Potatoes	per bushel..	05
Turnips, parsnips, carrots, beets	do....	10
All other, including onions (canned or preserved excepted), 10 per cent. ad valorem.		
Vinegar	per gallon..	15
Wines, viz:		
Champagne	do....	3 00
Claret	do....	40
Hock, Burgundy, and light Rhenish wines	do....	85
Malaga and Montilla, costing at port of shipment 80 cents a gallon, and any other above that price, 12½ per cent. ad valorem	per gallon..	1 00
Malaga and Montilla, costing at port of shipment under 80 cents a gallon	do....	85
Port and Madeira	do....	1 65
Sherry and Manzanilla, 12½ per cent. ad valorem	do....	1 00
Spanish red, Denia, Sicilian, Figueira, red Lisbon, Cape, and Lisbon common	do....	85
All other wines, 12½ per cent. ad valorem	do....	1 10

Ad valorem duties.

	Per cent.
Fresh meat, poultry, eggs, oxen, cows and bulls, tallow, grease, and palm oil	7½
Anchors and chain cables, copper and composition metal for ships, including bars, bolts, sheathing, and nails, of the same materials	10
Bread-bag brin or bagging	10
Canvas, sail cloth, and tarpaulin canvas, for ships' use	10
Cordage, viz.: rope and hemp, coir and manila cables	10
Corks and corkwood	10
Fishing tackle (except fishing tackle for anglers)	10
Hoop iron	10
Iron of all kinds, in bars, bolts, sheets, plates, and pieces (save as hereinafter exempt)	10
Machinery and parts of machinery, including propellers	10
Nails (wrought)	10
Oakum, pitch, tar, resin, and raw turpentine	10
Oranges, lemons, grapes, nuts, limes, and olives	10
Sheet tin, block tin, and solder	10
Worsted and woolen yarn of all kinds	10
Bran, barley, malt, Indian corn, and rice	12½
Mast pieces and spars, not manufactured	12½
Medicines	12½
Staves (undressed)	12½
Dories and dory oars	15
Hay	15
Leather	15
Nails (cut)	15
Oleone oil, beef oil, neutral, lard stock, cotton-seed oil, oil of sesame, and other oils used in the manufacture of oleomargarine or artificial butter	20
Cabinet wares	20
Candles	25
Carriages, wagons, sleighs, and harness	25
Casks in which dry goods are imported, when fit to hold liquid	25
Manufactures of wood (except musical instruments)	25
Staves, manufactured and dressed	25
Stockings, shirts, and drawers (made by hand)	25
Ready-made clothing, viz: coats, jackets, trousers, waistcoats, southwesters, mantles, dresses, cloaks, and sacks	25
Goods, wares, and merchandise not otherwise enumerated, described, or charged with duty, and not otherwise exempt	20

TABLE OF EXEMPTIONS.

The following articles imported into this colony and its dependencies shall be exempt from payment of duties:

Agricultural implements and machinery imported by agricultural societies for the promotion of agriculture.

Arms, clothing, and provisions for Her Majesty's land and sea forces

Articles imported for religious purposes, not intended for sale.

Articles of every description imported for the use of the governor.

Articles for official use of foreign consuls.

Bait.

Bark for tanning leather.

Boiler and ship plates.

Coals when not imported into the ports of St. John's, Harbor Grace, or Carbonear.

Coin and bullion.

Cotton yarn, cotton (raw), and coke.

Corn for the manufacture of brooms.
Crushing mills for mining purposes.
Donations of clothing specially imported for gratuitous distribution by any charitable society.
Dye stuffs.
Oysters and clams in shell.
Fish of British catch and cure, and oil the produce of such fish.
Fruit, not being canned, bottled, or preserved, and not otherwise enumerated.
Gas-engines when protected by patent.
Hemp, hemp yarn, coir yarn, sisal, manila, flax, and tow.
Hides or pieces of hide not tanned, curried, or dressed.
Household furniture and working tools, and implements used and in the use of persons arriving in this colony.
Junk, old iron, old copper, and old composition metal.
Manures of all kinds.
Materials for sheathing the bottoms of vessels, such as zinc, copper, and composition metal, together with nails and paper or felt which may be used for or under such sheathing when used for sheathing the entire bottom of the vessel in which the same is imported.
Music, written or printed.
Ores and parts of ores used in the manufacture of copper paint.
Passengers' baggage.
Pig-iron, nail strips, whether iron, zinc, or brass, to be used in the manufacture of cut nails in this colony.
Plants, trees and shrubs.
Plows, harrows, reaping, raking, plowing, potato, and seed-sowing machines, to be used in this colony.
Printing paper, printing presses, printing types, and all other printing requisites.
Printed books, pamphlets, newspapers, maps, and charts.
Refuse rice.
Sand.
Scientific instruments and apparatus, including globes when imported for the use of colleges and scientific or literary societies.
Seed for agricultural purposes.
Specimens illustrative of natural history.
Steam-engines, boilers, propellers, water-wheels, and saws, when used in the original construction of steamboats built in this colony and of mills and factories.
Sulphuric acid when used for the manufacture of manures.
Twines to be used in manufacturing nets and netting in this colony.
Unmanufactured wool.
Wheat.
Works of art, namely: engravings, paintings, statuary, not intended for sale.

LOCAL DISTILLATION.

The following duties shall be raised, levied, and collected on the following articles distilled or brewed in this colony, namely:

	Per gallon.
Brandy, not exceeding the strength of proof by Sykes's hydrometer, and so in proportion for any greater strength than the strength of proof	$1 75
Whisky, not exceeding the strength of proof by Sykes's hydrometer, and so in proportion for any greater strength than the strength of proof	1 60
Gin, not exceeding the strength of proof by Sykes's hydrometer, and so in proportion for any greater strength than the strength of proof	1 45
Rum, not exceeding the strength of proof by Sykes's hydrometer, and so in proportion for any greater strength than the strength of proof	1 20
Ale, porter, Bavarian beer, Botanic beer, and all other malt and dextrinous liquors	05

Resolved, There shall be a drawback allowed upon tobacco manufactured in this colony when such tobacco shall be exported from this colony at the rate of fourteen cents per pound of such tobacco exported as aforesaid: *Provided*, That such drawback shall not be allowed upon any quantity of tobacco so exported at any one time less than 500 pounds. No drawback shall be allowed or payable on tobacco stems exported from this colony.

Resolved, The duties payable upon leaf-tobacco imported into this colony and its dependencies where the duty set forth in any entry shall amount to $200, may be secured to Her Majesty by bond in the same manner as duties payable upon other goods may be now so secured, and subject in every respect to the same regulations.

Resolved, There shall be allowed to any printer a drawback to the amount of any duties that may have been paid on any paper actually printed upon in this colony, upon the production of affidavits satisfactory to the receiver-general, setting forth the amount of duties which have been paid thereon, and that the said paper has been actually and *bona fide* printed upon in this colony.

Resolved, There shall be allowed a drawback upon biscuit manufactured in this colony from flour imported on which duty has been paid at the customs when such biscuit shall be exported from this colony, at the rate of 17 cents per hundredweight of such biscuit exported as aforesaid: *Provided*, That such drawback shall not be allowed upon any quantity of biscuit so exported at any one time less than one hundred bags.

Resolved, The duty hereinbefore provided to be levied upon fish is subject to the following proviso, namely: *Provided*, That the governor may by proclamation published in the Royal Gazette remit as he may deem equitable the whole or any part of the duty imposed on fish imported into this colony or its dependencies from countries making such changes or reductions in their tariff of duties with respect to fish, the produce of fish, or other articles exported from this colony and its dependencies to such countries.

Resolved, It shall not be lawful for any importer of dried fish to warehouse the same in any of the ports of this colony and its dependencies without the payment of the duty hereinbefore provided of $1.50 on every quintal so warehoused, and the provisions of any act of this colony with regard to the warehousing of goods on the first entry thereof, or to the allowance of drawbacks upon exportation, shall not in either case apply or be construed to apply to such fish.

Resolved, That in addition to the duties hereinbefore provided to be levied, collected, and paid on goods, wares, and merchandise hereinafter mentioned imported into this colony and its dependencies from countries the fishermen of which have the privilege of taking fish on all parts of the coast of Newfoundland and its dependencies, and in which countries duties are, or shall hereafter, be levied upon fish and the produce of the fisheries exported from this colony to such countries, the following duties, namely:

Flour	per barrel.	$0 75
Pork	do.	75
Butter	per 100 pounds.	75
Tobacco	do.	5 00
Kerosene oil	per gallon.	05
Cor meal	per barrel.	33½
Hay	per ton.	5 00
Oats	per bushel.	10
Potatoes	do.	25
Turnips	do.	25
Cabbages	per dozen heads.	40

Unenumerated vegetables, thirty per cent.

Provided always, That the governor in council may at any time, when it shall be made to appear to be for the interest of this colony, by proclamation, to be published in the Royal Gazette, suspend the operation of this clause for a limited period, the duration of such period to be stated in the said proclamation.

CUSTOM-HOUSE, ST. JOHN'S, *April* 1, 1887.

EXPORTS FROM LYONS.

Exports from Lyons to the United States during the months of April, 1887 and 1886, and for the first four months of the years 1887 and 1886.

Articles.	April, 1887.		April, 1886.	During the first four months of—	
	Value.	Value.		1887.	1886.
		Francs.	*Francs.*	*Francs.*	*Francs.*
Raw silks	$89,643 98	464,476 60	196,221 45	2,806,680 60	1,320,315 30
Organzines silk				5,014 30	
Silk and velvet piece goods and ribbons	358,609 79	1,858,081 80	1,856,304 80	12,316,804 90	12,319,104 05
Crapes, laces, gauzes, &c	32,548 27	168,643 90	265,186 05	516,808 50	1,046,770 35
Shawls					
Silk trimmings					9,119 55
Metallic trimmings and church ornaments	7,488 19	38,798 90	95,666 55	234,345 85	313,175 40
Silk and cotton gloves					
Woolen goods					
Cotton goods					
Leather and skins	482 31	2,499 00	14,577 15	22,772 60	33,270 55
Dye stuffs	4,629 18	23,985 40	24,231 00	76,940 90	86,833 15
Manufactures of iron, &c	3,914 44	20,282 05	12,792 50	85,690 10	42,050 65
Wines and liquors	13,026 62	67,495 45	77,391 35	162,402 20	162,589 65
Musical instruments			4,908 80		8,467 20
Argols	58,507 66	303,148 50	139,882 60	916,219 95	540,538 90
Pierced cocoons			34,164 20	94,067 60	78,083 85
Macaroni, &c	5,208 06	26,984 75	25,957 20	194,789 40	155,704 25
Spectacles, eye glasses, &c	267 35	1,385 25	4,767 00	22,101 95	14,760 50
Weaving utensils	75 05	388 85	3,197 45	17,379 60	5,719 85
Precious stones	1,222 26	6,334 75	2,400 25	20,042 60	10,936 10
Rabbit hair			5,683 65		5,683 65
Watch materials	712 17	3,690 00	807 50	4,878 85	12,005 30
Wooden pipes	2,201 72	11,407 90	2,850 50	52,315 50	10,458 05
Waste silk	1,532 12	7,938 45	20,182 85	141,328 45	521,057 75
Spun silk and dyed silk					
Preserved fruits			1,640 60	6,792 70	5,043 95
Miscellaneous	9,148 45	47,401 30	66,469 90	242,263 55	198,044 75
Totals	589,227 62	3,052,992 85	2,855,345 35	17,940,300 10	16,099,787 75

Total for the first four months of 1887 ..... $3,462,477 92
Total for the first four months of 1886 ..... 3,223,059 04
Increase for the first four months of 1887 ..... 239,418 88

E. H. BRYAN,
Consul.

UNITED STATES CONSULATE,
Lyons, France, April 30, 1887.

RAILROADS IN SIAM.

FROM MINISTER CHILDS.

At last Siam is to have a number of railroads. Last week His Majesty King Chulalongkorn granted to Capt. A. J. Loftus, his hydrographer, and Capt. A. Richelieu, two Europeans who stand high in favor with the King, holding prominent positions here, concessions to build five railroads in various parts of Siam and the sole right to lay and operate for fifty years a tramway in the city of Bangkok, the latter of which will necessitate the laying of at least 20 miles of rail. The road from here to Paknam, at the mouth of the river, will be

about 20 miles in length. Captain Loftus left with Prince Devawongse for England to form a company and secure proper parties and capital to build the road. The tramway in the city will be of great benefit and is a most valuable concession. The interior of Siam once opened up by railroads, a great deal of latent wealth will be developed and they will add largely toward settling up sections that are now lying idle.

JACOB T. CHILDS,
Minister.

UNITED STATES LEGATION,
Bangkok, Siam, May 11, 1887.

NOTES.

Cotton cultivation in Russia.—Minister Lothrop writes as follows.

The Imperial Government is making very strenuous and persistent efforts to promote the cultivation of cotton within its own dominions, with the hope to carry the home production to the point of excluding all foreign-grown cotton.

An article in a late number of the Journal of St. Petersburg, compiled from the Moscow Gazette, may be found interesting in this connection.

It has recalled to me a conversation I had this spring with Lieutenant-General Annenkoff, the able and enterprising soldier who has charge of the construction of the trans-Caspian railway. He assured me that he should open the line to Samarcand on the 15th of November next, and gave me an invitation to attend the formal opening on that day. He said that, within one year he should be able to deliver Central Asia cotton in Moscow at one-half of the present price of cotton there.

You will notice that an increase of the duty on cotton is suggested, and as that falls in with the ruling policy, it is very probable that it will be done.

The Journal supposes that in Central Asia, and also in the trans-Caucasus, the conditions for cotton culture are essentially the same as in the United States. But this is probably not quite accurate.

As I am informed, in most places irrigation will be necessary. And it will be long before the native cultivators can be inspired with American skill and enterprise. At present the native cotton is said to be inferior in the strength and length of its fiber. This may be overcome by the introduction of new varieties. The Government has already brought seed and experts in planting from America. It has recently been stated that there was already a considerable cotton plantation near Merv owned and operated by Americans; but this was afterwards denied, and it was added that a concession of land for that purpose had been refused to a company of Americans. I do not know what the fact is.

The Russian "pood" equals 36 pounds 10 ounces English weight.

[Translation of cutting from the Journal de St. Petersburg of May 29 and June 10, 1887.]

The Gazette de Moscow, praising the fullness of information of the commercial statistics gathered by the ministry of finance, borrows from them details about the quantity of raw cotton imported into Russia during the last five years.

This product, it is well known, is of great importance to us, and takes the lead in our importations.

Below the amount of cotton imported into Russia over the European frontiers is given:

Years.	Quantity.	Value.
	Poods.	*Rubles.*
1882	6,710,200	72,417,000
1883	8,090,298	93,864,000
1884	6,270,243	76,635,557
1885	6,377,884	65,908,460
1886	7,247,651	71,609,127

During the last five years there has therefore been imported, and over the European frontiers alone, 34,703,221 poods of raw cotton, for the sum of 380,434,144 rubles. An annual outlay of 70 or 80 millions for foreign cotton, says the Gazette, has a perceptible influence on our commercial balance, whilst the industry based on the importation from abroad of a foreign product makes our manufacturers entirely dependent on the producers and commission merchants who deliver it.

At the present time the United States are the principal cultivators of cotton. This product was, in 1885, to the extent of 1,244,000,000 kilograms, whereas, India, which follows after America, only gave, the same year, 227,000,000 kilograms. In short, three-fourths of the cotton of the whole universe comes from North America.

To free our manufacturers from their dependence upon the producers of the other side of the water, and to avoid the obligation of paying dear for a product which could be cultivated in Russia, it is only necessary to encourage its cultivation. That would not, says our cotemporary, be so difficult as one would think, for all the essential conditions for cotton cultivation are united in the south of Russia. The trans-Caucasian country, as well as our possessions in Central Asia, differ in no way as to climate from the United States.

The proof of this is that the best kinds of American cotton are cultivated there with success, and considerable progress has already been made, in spite of the little care given by us to cotton. Thus, only six years ago, but 21 poods of American cotton were exported from Taschkend, whereas last year over 25,000 were gathered.

In the province of Erivan, where a few years since this cultivation was in its infancy, it is now assuming the appearance of a real industry. These examples prove sufficiently that cotton could be cultivated with us on a great scale. Only a little more energy is required and the capital necessary for so vast an enterprise. Without help from the state no result could be reached, because, independently of the necessary works for irrigation of the plantations, the installation of which would be very costly, it is indispensable that a credit should be opened to the planters sufficiently large for their first wants, and notably for the purchase of seed of good quality.

The objections to this project, which would have for basis the impossibility of weighing down the budget with a new expense, are groundless. Without creating new articles of expenditure, the cotton industry itself might be made to pay for the creation and improvement of this branch of agriculture.

The duty on cotton is 45 copeks in gold; this could be raised to a ruble, which would bring in an increase of revenue of about 4 millions a year. This sum should be used only for the development of the cotton industry.

Foreseeing other objections, showing the probable loss is to the consumers, upon whom the additional tax would fall, the Gazette de Moscow affirms that these losses would amount to nothing, and it estimates them at the utmost at scarcely a quarter of a copeck an archine (28 inches) of stuff.

So small a loss would comparatively have no importance in the probable results of this measure in favor of the cultivation of Russian cotton.

The cotton manufacturers of Moscow are already prepared for an increase of the duty on foreign cotton, and they stipulate in their contracts of sale of goods for next autumn the proviso in case of a possible additional tax; there is that much gained.

As to the calculation made by our cotemporary, is he really ignorant of the fact that the increase in the price of an article as regards the consumer never corresponds with the tax levied by the state, and which the manufacturers always know how to at least quadruple?

Silver-crisis bill in Mexico.—Consul-General Sutton writes under date of June 25, 1887:

The following is the English translation of the new law to relieve the mining interests of Mexico, which was passed at the late session of the Congress. It has not yet, I believe, been approved by the President; but as it was passed by a Congress which is strongly administration, it will undoubtedly be signed by him. It is so important, that I anticipate its official publication, and take that of the Mexican Financier of the 4th instant:

ARTICLE 1. From the promulgation of this law, freedom from all federal, local, and municipal taxes, with the exception of the stamp tax, will be granted to all coal mines, petroleum springs, iron and quicksilver mines, as well as their products; to native malleable and cast iron in bars, rods, pigs, plates, and rails; and to native quicksilver, the liquid product of the minerals from which it is extracted.

ART. 2. The interior State duties, portage tax, &c., however denominated, shall not be levied on the movement, within the Republic, of gold or silver ore, bullion or coin, or on the circulation of the other metals and mineral products.

ART. 3. Quicksilver, whatever may be its origin, shall be exempt from any tax however denominated.

ART. 4. Beyond the coinage tax, the mines not excepted in Article 1, and their products, shall be subjected to but one tax, which shall be placed on the value of the metal or mineral product without allowance for expenses of production, but which, however, shall never exceed two per cent. of that value.

ART. 5. The tax specified in the previous article shall be assessed for the state in which the mine is located, or for the Federal Government when located in the federal district; and the amount of such tax shall therefore be fixed annually by the

several State legislatures within the limits prescribed, and in cases pertaining to it by the national Congress, attention being given to the condition of the treasury, and consideration being had for the protection which should be given to the mining industry.

ART. 6. Reduction works and metallurgical (assay) offices of every class, when in operation, shall pay to the State in which they are located, or to the federal district, a single tax, which shall not exceed six per thousand on the value of the estate and machinery.

ART. 7. The federation shall receive, as provided, 25 per cent. of the taxes levied by the several States, in accordance with the previous regulations.

ART. 8. Any other tax, except the stamp tax, however denominated, on the extract, product, or profit of mine or reduction, on the product or profit of mineral establishments, on the capital invested in mines or mills, shares of stock and bonds, or on any kind of metallurgical offices, on transfer deeds to mines and mills, and on all stock representing the same, is positively forbidden by this law.

ART. 9. The states are forbidden to charge any tax for the denouncing, possession, or other formalities or operations necessary for the acquisition of mining properties or reduction works, or for the organization of stock companies, or the transfer or issue of bonds and stock.

ART. 10. The executive is authorized to make contracts, by granting special franchises and ample concessions, without prejudice to the rights of third parties, to companies which guarantee the investment of capital in mining, the extent of territory granted being considered in connection with the amount of capital to be invested, the nature of the mineral, and the conditions of the locality, in conformity with the following rules:

(*a*) The duration of the franchises and special concessions shall in no case exceed ten years.

(*b*) The minimum of capital to be invested in prospecting and operating shall be two hundred thousand dollars within five years.

(*c*) This capital shall be exempt during ten years from all federal tax except the stamp tax.

(*d*) The maximum number of properties which may be granted in ordinary cases shall be twenty, together or separate, the number being determined by the rules and regulations of the respective department of the ministry of public works in proportion to the capital, quality and quantity of mineral, and conditions of the locality, the owners always enjoying the greatest liberty to work on one or all of the properties with not less than twenty operatives.

(*e*) Only in case of discovery or re-establishment of mining districts can the number of claims so conveyed exceed, according to circumstances, the number indicated by one-half.

(*f*) The extent of such properties shall be subject to the requirements of the mining code, except in the case of gold placers, in which case the property shall be considered of irregular yield.

(*g*) Of the twenty claims mentioned in subdivision *d* and the thirty in *e* only ten can be located on one vein in the first case, and fifteen in the second, as the maximum, either continuously or separate, unless there be but one vein in the mining district, in which case the whole number may be located upon it.

(*h*) These properties may be protected by the ministry of public works, in cases seriously contested, during the space of two years—a maximum limit that must not be exceeded.

(*i*) This extraordinary protection can be conceded only once, whatever causes may be alleged, but others can be granted in accordance with the requirements of the mining code now in force; but no protection shall be regarded as a motive for extending the privilege longer than the ten years mentioned in the respective contracts.

(*j*) The ministry of public works will authorize owners of claims, if it may be considered proper to do so, to divide and transfer, with previous consent of the ministry, the concessions contained in the contracts; always provided that the new mining companies shall assume their proportion of the obligations.

(*k*) All these companies shall enjoy the rights, and be subject to the obligations, which the mining code prescribes on the expiration of the time specified in their contracts.

ART. 11. For the term of ten years the industries of pisciculture, grape culture, and silk-worm culture shall be exempt from all federal tax except the stamp tax. For the enjoyment of this exemption, said industries shall be subject to the conditions fixed by the respective regulations.

ART. 12. The Executive is authorized to contract with the railroads for a reduction

of the freight rates on native products destined for exportation on the following bases:

(*a*) The Executive shall fix in his annual estimate the amount necessary to cover the sum charged by the railroads for services rendered under this head.

(*b*) The ministries of finance and public works shall dictate, two months before the expiration of the fiscal term, the necessary measures whereby exporters may avail themselves of the advantages specified.

(*c*) The exports which shall be entitled to a freight reduction shall be divided into four classes, among which, according to the importance they acquire and the protection they need, the Executive shall locate them every year, publishing, with due notice, the respective classification.

The provisions of this law shall take effect in the different States July 1.

Russian petroleum in Germany.—Consul Fay, of Stettin, writes under date of May 16, 1887, as follows:

The German-Russian Naphtha Company, of Berlin, have purchased a small island near Stettin, and will build thereon large tanks and steam pumps for the purpose of handling and storing Russian petroleum in large quantities. The oil will be conveyed in tank steamers, to be built for that purpose.

The German Government has sanctioned the undertaking, and an extensive force will be employed at once in making the nece sary improvements on the island, whereby the oils may be handled at a very small expense.

It is the intention of this company to force the Russian oil on the German markets by delivering it at a much cheaper price than the American petroleum can be sold for. Although the latter oil is of superior quality and at the present time is sold at a very low price, namely, 18 cents per gallon at retail, it is so considered that, by offering the Russian oil at a low price, it will be readily purchased by the majority of the people. This company also claims that by proper handling and refining the Russian oil can be made as good as the American petroleum, and this they say will be attained.

The different oil importers are not so sanguine of the success of this project, however. True, the cost of the barrels will be saved by the company, but where are the casks to come from in Germany? One large importer who has diligently studied the subject informs me that barrels sufficiently good for holding petroleum cannot be made here for less than $1.75. It is the supposition that American oil casks will be purchased by this company for the purpose of handling their oil. There will be another advantage in using these casks, the oil can be sold for American petroleum. I am indirectly informed that this is now being done at Bremen. Russian oil is being brought to that port, put into American casks, and sold as American petroleum.

As contemplated by this company, a pipe line will be laid from the oil regions to the ports of Batoum and Poti, and from these ports the oil will be conveyed in tank steamers. They are very sanguine of success.

The prevailing opinion among oil-men is that it will be an unsuccessful undertaking, inasmuch as the tank business already established at Lübeck, near Hamburg, is proving unprofitable.

Information has been received at the exchange in Stettin that the Rothschilds of Paris and Frankfort have purchased the entire oil interests in Russia, and will lay pipe lines to the principal ports, and will endeavor to supplant the American oil in Europe. This news, however, is not authentic.

Trade of the United States with Colombia.—Consul Vifquain, of Barranquilla, under date of June 20, 1887, writes as follows:

Colombians will not purchase from American manufacturers, for the good reason that they can purchase the same wares from English manufacturers at 30 or 40 per cent. less. I refer principally to machinery of all descriptions, except mining machinery and pumps, water pipes, railroad iron and material, agricultural implements, tools, &c.

Within the next five years not less than one hundred cities in South America will establish water-works, and all the material for these will be furnished by England. Large works are now in process of construction at Bogota, the capital of this nation, and all the material for them is landed at this port. It comes from England and is carried in English bottoms.

Speaking to the contractor the other day, while looking at the material being put on river steamers—steamers mostly built in England—I told him that the United States could furnish better pipes than those he shipped to Bogota. "I know it,"

said he, "but these are good enough for all purposes and 35 per cent. cheaper than any I priced in the States. I would prefer to deal with your people, but business is business."

Not a locomotive nor railroad car can I see that is of American make; all are made in England; and yet the owner of the railroad is an American. Not one rail comes from the States; all are English. And yet it is safe to say that within the next twenty-five years not less than fifty thousand miles of railway will be constructed in South America. Let United States manufacturers ponder over this, for English manufacturers will furnish all this vast material, unless our manufacturers are willing to compete with foreign manufacturers upon the merits of their wares alone.

An English syndicate of iron manufacturers—the same that had operated so extensively in Chili during the last few years—has just purchased a 200-mile railroad concession in this country, and thus the industry of these manufacturers thrives; a market is made for their goods by their intelligent business methods. Why cannot American manufacturers do the same? And it might be as well to remember that if English capital controls the railroad system of this continent, as it is in a fair way of doing, that the same capital will control all the commercial and industrial avenues of this vast and extremely rich country—second, in fact, to no other land in the world in natural resources of all sorts.

Indigo trade in San Salvador.—Consul Du Pré writes, under date of June 24, 1887:

The quantity of indigo produced annually in Salvador varies from 9,000 to 15,000 bales of 150 pounds each. Unlike most other products of the country, only one crop is produced each year and a smaller second crop from the same seeding. If locusts, now ravaging narrow districts, do not lessen the present early and promising yield, it will surpass in quantity and value, for each pound, that of any former year, and the product will be 15,000 bales. The crop of the current year is quite a month and a half earlier than those of recent preceding years, and therefore the second crop that springs up, after the first is taken from the fields, will be much greater than usual.

Indigo seeds, very much like those of mustard, are somewhat larger. They are sowed broadcast, like wheat and oats, and plowed in. Every seed germinates twice, and thus the two annual crops. Prices fluctuate greatly and without apparent cause. The natives are capricious in their demands and fancies. There are no bulls or bears in marts of Salvador. The crop as prepared for market is graded, like cotton and wheat in the United States, and the numbers "6," "7," "8," and "9" on the bales define the class or grade to which the bale belongs. The last of the figures designates the best and the first the lowest grade. Indigo of the best quality, No. 9, is worth now about $1, while the lowest grade, No. 6, is sold at 30 and 35 cents a pound; but prices fluctuate greatly and rapidly. Buyers who purchased here last year, paying as much as $1.20 for the best indigo in local currency (Peruvian "pesos"), lost heavily.

The absolute cost of production here, in the local currency, is 65 cents a pound, while in India, where the English have introduced labor-saving machinery, the cost is 25 cents in English money. Here the indigo is cut with "machetes," instead of reapers. It is very much like oats in the fields, and this method of mowing is tedious and laborious. When cut the indigo is soaked in vats, "puddled," boiled, strained, and dried, and all this by the simplest means and all by manual labor. The natives convey the indigo to the market towns in packs on their backs. Samples are spread on mats, beside which the farmer sits awaiting customers, and these are attracted from all lands by the annually recurring indigo fairs of Salvador. These market periods in each city commonly last from eight to fifteen days. The special saint of each of these indigo markets is specially invoked during the continuance of the sales, and thus the priests and churches share in the profits incident to these gatherings of the people.

Buyers of indigo in the United States should know that the first great indigo fair of the year begins August 30, at Santa Rosa; the next, when the first closes, at Chalatereango; the next at Sesuntepeque, and then follow those, attended by great multitudes, at San Miguel, near the harbor of La Union, which begins on the 17th and lasts till the 25th of November.

Formerly consumers of indigo in the United States bought and imported their supplies from India through Liverpool or London; but the excellence of this hand-prepared product of Salvador has caused rapid degeneration of trade in this dye stuff with Salvador, and instead of 400 or 500 bales, as in former years sent to the United

States, it is thought that one-sixth of the whole crop of 1887 will be taken by New York and Boston and by cotton-mill owners of the South. The lower grades of indigo have hitherto been sought here, used in dyeing coarse and strong cotton fabrics used by laborers in the South and West; but the silk and fine cloth manufacturers of Eastern States can secure as good indigo in Salvador as in Bengal, whence the silk factories of France are supplied.

There is unhappily for Salvador an export duty of $3.37 on each bale of indigo of 150 pounds.

Manufacture of potato starch and flour in Germany.—Vice-Consul-General Versen writes, under date of June 11, 1887, as follows:

Export of potato flour and starch during the year 1886, *via Hamburg.*

[In 100 kilograms (2.2 cwt.)]

Destination.	Quantity.	Destination.	Quantity.
Destination unknown	291,503	Sweden	2,646
Great Britain	48,337	Belgium	1,436
Denmark	22,537	Russia	1,416
Italy	12,268	United States	398
Switzerland	11,906		
Netherlands	6,784	Total exports 1886	415,686
Spain	5,573	Total exports 1885	337,576
Norway	4,529	Total imports 1886	9,947
France	4,040	Total imports 1885	12,668

Largest importers in 1886.

Austria	1,557
Great Britain	1,405
United States	470
Netherlands	409
Switzerland	88

Prices for starch and flour are stated to have been very low and hardly profitable in recent years, varying from 16 marks to 19.25 per 100 kilograms.

A Berlin firm, Albert Fesca & Co., who in former years were engaged in the construction of potato-starch factories, wrote to this office that they had abandoned that business as unprofitable.

The average price of first-class flour at present is stated at 17 marks per 100 kilograms.

Average prices of potatoes per 1,000 kilograms, without sack, at Berlin in 1886, 20.53 marks; Magdeburg (a principal district for the manufacture and trade of potato starch), 18.67 marks; Stettin, 17.83 marks.

KIND OF POTATOES USED.

For good potatoes in a fully ripened condition the following average composition is assumed:

	Per cent.
Water	72
Gums	
Salts	4
Juice	76
Albumen	1
Cellulose	2
Starch flour	21
Dry substance	24

Of which 23 per cent is insoluble.

Analysis of a red potato cultivated near Madgeburg.

	Per cent.
Starch flour and fibrous substance	30.47
Albumen	0.50
Gluten	0.06
Fat	0.06

	Per cent.
Gum	0.02
Asparagine	0.06
Extractive substances	0.92
Salts	0.81
Chloride of potassium	0.18
Free native acid	0.04
Water	66.87

Potato starch as a commodity in trade is a dry fine powder, or it appears in lumps intermingled with powder, or as so-called "green starch," in moist or wet condition. The same possesses a slight shade of yellow and a peculiar smell and taste suggestive of that of potatoes, caused by a volatile oil.

For starching and finishing purposes potato starch as a rule is not used, partly on account of its yellow color. It serves, however, as glue in stuff-weaving mills, as a medium of color thickening in printing stuffs, in confectionery, baking, and cooking, and in large quantities for the manufacture of dextrine, starch sirup, and starch sugar. This kind of starch consists of the largest grains, which under the microscope appear ovular, with hilum at the pointed end, and shows circular stripes as a sign of stratified structure.

Large quantities of potato starch are manufactured also in the provinces of Silesia; less in Pomerania and Posen.

Proportion of raw material to product.

The German manufacturers, as I learn through the United States consular agent, Mr. Weichsel, use about 1,200 kilograms of potatoes to make 100 kilograms of flour (first quality).

The cost of reducing potatoes to flour, inclusive of drying, making up, &c., varies between 8.50 and 10 marks per 1,200 kilograms of potatoes, including all manufacturing expenses.

Besides the first-class flour, second and third class qualities are manufactured at the close of the season from the refuse of the first process. These secondary products are, of course, of an inferior quality, and sell at lower rates, but the net proceeds therefrom are not included in the above calculations.

Cost of a potato-starch factory, working 60,000 kilograms potatoes in twenty-two hours a day, would amount to about 266,400 marks (according to an approximate itemized estimate of Messrs. C. Reudolf & Co., Neustadt-Magdeburg Machine Works), viz:

Capital stock.

	Marks.
Premises, buildings, &c.	95,000
Machinery	85,000
Working capital	50,000
Total	230,000

Charges.

Interest for 230,000 marks at the rate of 4½ per cent		10,350
Sinking fund for building, 2 per cent		1,900
Sinking fund for machinery, 5 per cent		4,250
Potatoes, 170 × 60,000 = 10,200,000, .130 marks each		183,600
Pit coal, 170 × 125 cwt. = 21,250 cwt., .85 mark each		18,065
Oil, candles, 180 days × 10 marks		1,800
Sacks, 20,910, each .50 mark		10,455
Salaries:		
	Marks.	
Manager	6,000	
Book-keeper and cashier	3,000	
Counting clerk	1,200	
Steward	1,500	
Foreman	1,500	
Night guard	1,200	
Machinist	1,200	
Guard	600	
Driver	600	
		16,800

	Marks.
Wages—30 men, 2 marks each; 6 boys, 1 mark each; 170 days	11,220
Postage and stationery	1,000
Traveling	1,000
Taxes, imports, fire insurance, and insurance of laborers against illness and accidents	1,200
Horse, carriage	2,000
Other deficiencies	2,760
Total	266,400

Proceeds.

Seventeen per cent. finest flour, first quality; 2½ per cent. starch, second quality; 1 per cent. starch, third quality; pulp being used for food or eventual manufacture of paper.

	Marks.
10,200,000 kilograms × 17 = 17,340 sacks of starch, first quality, each 15.5 marks	268,770
10,200,000 kilograms × 2½ = 2,550 sacks of starch, second quality, each 14 marks	35,700
10,200,000 kilograms × 1 = 1,020 sacks of starch, third quality, each 11.50 marks	11,730
10,000,000 kilograms of pulp, .10 mark per kilogram	10,000
	326,200
Less total expenses	266,400
Net proceeds	59,800

Profit: $\frac{59,800 \times 100}{230,000} = 36$ per cent.

Manufacture of potato flour and "Kartoffel-Schnapps" in Germany.—Consul-General Mueller, under date of April 25, 1887, sends the following:

Germany, with a population of 47,000,000, raises a quantity of potatoes far beyond its wants as an article of food. Its large portion of surplus produce is being distilled into spirits known as *Kraftmehl-Schnapps*. The potato distilleries occupy a prominent and important place in the constellation of the national industries, and are encouraged and assisted by the allowance of great export privileges. The smaller portion of the surplus is reduced to flour or potato meal. Prices of potatoes are low, and producers complain of the unprofitableness of the potato culture. Table potatoes of first quality are being sold at an average price of 2½ marks up to 3 marks per 100 kilograms, or 220 pounds. The average price of inferior qualities, to be used for distilling and flour making, is 2 marks per 100 kilograms (50 cents), or 12½ cents for an American bushel of 50 pounds weight.

Potato flour (*Kraftmehl*) is produced at a large rate; its production has considerably increased during the last decade, owing to its use for multifarious mechanical purposes heretofore unknown. It is used in considerable quantities by sausage makers, bakers, confectioners; also for cooking and powdering purposes. Textile and weaving establishments manufacturing "zanella," cotton prints, and other fabrics of silk and cotton use it to size and strengthen the threads in the woof and to give it a glossy appearance. Its use in large quantities for the manufacture of starch and potato sugar and white sirup is generally known.

The establishments manufacturing alizarine and aniline are also using an extract from potato flour called "dextrine."

The quantity of potato flour annually produced, imported, or exported is not to be ascertained, for the reason that the official statistics fail to give a separate account thereof, but mention *Kraftmehl* only in combination with starch, arrowroot, and powder.

The import duty imposed upon potato flour is 9 marks per 100 kilograms ($2.30), just about one-half of the present market price of the article.

The average price of potato flour per 100 kilograms (220 pounds) is 18 marks ($4.28).

Potato flour is principally manufactured in Northern Germany, Silesia, Hanover, and East Prussia, in which provinces the system of large land possessions of feudal origin afford greater advantages for mass production.

In view of the facts stated, I have come to the conclusion that there is no opportunity for a profitable export of American potato flour to this country; the comparatively low price of the raw material and the high import duty (to say nothing of the costs of packing and of shipment and of the difference in wages for labor) preclude any such idea. I do believe, however, that American growers of potatoes and manufacturers of potato flour are fully capacitated to supply the American market with potato products and potato-flour manufactures against any foreign competitors.

Manufacture of alcohol from sweet potatoes.—Consul Dabney, of Fayal, Azores, writes under date of April 30, 1887, as follows:

Besides the distillery at the island of Terceira, there are two very large ones at the island of Saint Michael's; the larger of which, I have been told, can dispose of sixty tons of potatoes per diem. The machinery is German in these three distilleries (the only ones of the kind in the Azores), and the engineers German and French.

The potato in use is a large, round one, called here the Demerara potato. I have also heard that the business has been overdone.

Duty on petroleum-barrels in Germany.—Consul Fox, of Brunswick, transmits the following:

It was reported several weeks since that the federal council would at an early day take up the matter of the duty upon petroleum-barrels. The necessity for the removal of the duty is apparent. At the time of its introduction, November, 1885, an empty petroleum-barrel was valued at 4.50 marks ($1.07), while the price to-day is 3.40 marks (80 cents); from which 85 pfennigs (20 cents) per barrel, customs charges for drawback certificate, &c., is deducted, leaving 2.55 marks (60 cents) as actual value. The cooper trade is therefore not only not benefited by the arrangement, but really suffers therefrom. The Imperial revenue from the duty collected upon empty petroleum-barrels in 1886 hardly amounted to 300,000 marks, paid principally by smaller dealers, who were unaware that the duty would be refunded if the barrels were exported. The regulation as it stands affects chiefly the importers of petroleum, who formerly did not export the empty barrels, and now are unable to do so.

The moment the duty was established the American refiners joined together, and since then they buy the empty barrels from certain German firms only, and in consequence every German dealer is forced to sell to these firms at their prices. America, and not Germany, has the benefit, since the barrels must be exported, and America will continue to have it as long as the duty upon empty petroleum-barrels remains. (Magdeburger Zeitung, June 21, 1887.)

Belgian import duties on coffee and cattle and meat.—Vice and Deputy Consul Stein, of Brussels, reports, under date of 5th of July, 1887, as follows:

The following law, reducing import duty on coffee, was published in the Belgian official journal on the 1st instant: Green coffee, 10 francs per 100 kilograms. Roasted coffee, 13 francs per 100 kilograms. This law will be obligatory from July 1, 1887.

The same journal promulgated on the 1st instant the following import duties on cattle and meat entering Belgium:

ARTICLE 1. Bulls and bullocks, .04 franc; oxen, steers, and calves, .05 franc; cows and heifers, 0.3 franc per kilogram, live weight; sheep, 2.50 francs; lambs, 1 franc; per head; fresh meat, whole and half animals, .15 franc per kilogram. Other meat and game, .30 franc per kilogram. From the 1st of January fresh meat will not be permitted to enter into Belgium, excepting whole animals, half or fore-quarters of animals, and only on conditions that the lungs are attached.

ART. 2. The Government is authorized to permit the free admission into Belgium of foreign cattle sent to Belgian fairs and markets, and intended for re-exportation, under conditions to be determined by a royal decree.

This law will take effect from the 11th day of July, 1887.

The province of Kâshân, Persia.—Minister Pratt, under date of June 2, 1887, transmits the following:

According to the census taken three years ago, the population of Kâshân was 60,000 inhabitants, and the area about 3,375 square miles. Two-thirds of the province is under cultivation, the remaining portion consisting of salt marsh. The mineral productions are valued at 2,000 tomauns, or $3,000 per year, when worked, but

are worked only once in three years. The salt mines return 1,000 tomauns, or $1,500 yearly. Marble beds and large deposits of coal, iron, copper, and lead exist, but have not yet been developed. The principal products are tobacco, cotton, opium, silk, corn, and fruit. The amount realized by sale of last year's crop was:

Product.	Amount.		Value.	
	Kharars.	*Pounds.*	*Tomauns.*	
Tobacco	8,000	5,328,000	6,000	$90,000
Cotton	3,000	1,998,000	6,000	90,000
Opium	12	7,992	9,000	13,500
Silk	20	13,320	15,000	22,500
Dried fruit			17,000	25,300
Corn	40,000	26,640,000	200,000	300,000
Other products			12,000	18,000

During the past year one-quarter of the tobacco was exported to Turkey, one-half of the opium to China, and one-third of the cotton and all the dried fruit to Russia.

Salt crop of 1887.—Consul Hance, Turk's Islands, under date of June 30, 1887, writes as follows:

As at least one-half of the salt produced within this consular district is exported to the United States, it is a matter of some importance to dealers in the United States to be informed of the condition of the crop now gathering, and of the prices likely to be charged within the year.

During the six years from 1880 to 1885 there was an average annual product of 1,523,263 bushels. That may be considered a fair yield, and one justifying the merchants here in charging 9 cents per bushel for fishery and 7 cents per bushel for coarse salt, deriving a reasonable profit on the capital invested.

In 1885 the amount obtained was considerably above the average, being 1,928,220 bushels. Last year, owing to the heavy fall of rain, the amount was below the average, being only 1,141,374 bushels. However, as 450,000 bushels remained over from the previous year, unsold, there was an actual shipment of an amount equal to the average yield from 1880 to 1885.

The prospect for the current year is not bright. In former years, in the beginning of the season (usually the latter part of April), the stock carried over was sufficient to supply any pressing demands in case of a short crop. The 450,000 bushels remaining over from the crop of 1885 was sufficient to satisfy the requirements in May, 1886, when heavy rainfalls prevented the raking.

In the beginning of the current year, however, only 50,000 bushels remained on hand. When the time for the first raking arrived and the process of crystallization had made satisfactory progress, there was a fall of 3.44 inches at Grand Turk, of 1.49 inches at Salt Cay, and 1.69 inches at Cockburn Harbor. At the first-named place the work of gathering ceased temporarily, and it was much impeded at Salt Cay and Cockburn Harbor. A comparison of the rainfall in May, 1885, and May, 1887, will show how effectually the work this year has been retarded:

Ports.	1885.	1887.
	Inch.	*Inches.*
Grand Turk	.65	4.85
Salt Cay	.20	2.39
Cockburn Harbor	.80	2.30

At Grand Turk, in the middle of June, so much progress had again been made that about 110,000 bushels could be gathered. This is one-third of the crop usually obtained at that time of the year. Then, unfortunately, the hopes of the merchants were again dashed. For the last fortnight it has rained almost continuously, although, possibly, not so abundantly as in the preceding month. Raking at Grand Turk has terminated, and before the middle of July no more salt can be obtained, even if the weather should become propitious. It now seems probable that, unless the next three months are unusually dry, not more than half an average crop will be gathered at Grand Turk.

At Salt Cay and Cockburn Harbor there has been less rain, and consequently

more salt has been gathered, so that, at both these places, the quantity already secured is not very much below the average for this time of the year. Still, the probability is that the crop will be a short one.

At these three ports about 600,000 bushels have been gathered up to this time, and of this quantity about 130,000 bushels have been shipped, leaving on hand—

	Bushels.
At Grand Turk	70,000
At Salt Cay	160,000
At Cockburn Harbor	240,000
Total	470,000

There are two grades of salt made in this consular district, viz, fishery and coarse salt. At the close of the season last year, on account of the very small stock on hand, prices advanced to 15 cents per bushel for fishery and 13 cents per bushel for coarse salt. As soon as the raking began this year the prices were reduced to 10 cents and 7½ cents, respectively, per bushel. Now, owing to the recent rain, holders are considering the advisability of advancing the price for coarse salt to 8 cents per bushel, and this will probably be the rate until more salt is gathered.

REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 82.—AUGUST, 1887.

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1887.

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WEIGHTS, MEASURES, AND CURRENCY MENTIONED IN THESE REPORTS.

Name.	Country.	United States equivalent.
Caballaria	Honduras	33⅓ acres.
Franc	France	$0.193
Hectoliter		26.418 gallons.
Juchart	Switzerland	0.889 acres.
Kilogram		2.204 lbs.
Liter		1.057 quarts.
Meter		39.37 inches.
Meter centner		110 lbs.
Milreis (1,000 reis)	Brazil	$0.546
Quintal	Salvador	100 lbs.
Vara	Honduras	32.874 inches.

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ON

COMMERCE, MANUFACTURES, ETC.

No. 82.—AUGUST, 1887.

[In continuation of Consular Reports No. 80, June, 1887.]

EUROPE.

SWITZERLAND.

GENEVA.

Report of Consul Adams on trade and commerce of Geneva in 1886.

In several important particulars the commerce of the district during 1836 shows an improvement upon the year preceding. The harvests have all been well up to the recent average, which has been relatively high, and the most valuable product, the yield of the vineyards in the basin of Lake Geneva, has been wholly exceptional both in quantity and quality. Moreover, fine weather during the summer months and some change in the curious caprices of foreign travel brought back to this part of Switzerland, which had been comparatively deserted for a number of years, a large concourse of visitors, to the great benefit of the retail trade in the whole region.

But, as I have often observed in these reports, the prosperity of Switzerland depends to an unusual degree upon the foreign market, both for its sales and its supplies, and on the whole the situation is not very different from that of recent years. What seems to me the most noticeable feature is the continuous decline in the prices of nearly all products, with the double result of an increase both in exports and imports. A measure of the larger foreign demand for Swiss products is given in the accompanying table of the exportation from the district to the United States. Much the same is reported of European countries which are the customers of Switzerland, excepting, at least for this district, Great Britain, where the competition of the English, and, as I learn, the American manufacturers, has nearly excluded the Swiss watch from the market. The effect on importation again is seen in the remarkable increase of American products, of which, I regret to say, no statistics can be had in advance of the first annual report, under the new law of the Federal customs, to appear in a few weeks. The articles which are coming into

most extensive use are, besides a great variety of food products, the American base-burning stove, which is largely superseding not only the old-fashioned heaters but the cheap German imitations, sewing machines, agricultural tools and implements of all sorts, and an endless variety of useful inventions. Nearly all the hardware dealers now make a "specialty" of American articles, and one establishment in this city, the "Industrie Américaine," deals in nothing else.

This decline in prices, if it makes the conditions of life easier for the consumer, is naturally disquieting to the producer, as it means a competition of very wide extent, which he finds it harder every day to resist and to which he can see no limits. The character of Swiss agriculture has been extensively modified in the struggle, chiefly by the substitution of the cattle and dairy industry for others which have become unproductive. In manufactures, one important branch peculiar to this district, that of jewelry, has been almost wholly transferred to countries where labor is cheaper. It is to be said to the credit of the manufacturers here that they are trying to meet the difficulty by improving the methods, as well as by diminishing the cost, of production. An indication of this is the increasing number of patents applied for in the United States and other foreign countries, with the closer attention to artistic design and finish in watches, ornaments, pottery, musical boxes and the like. The enamels of Geneva, which have been celebrated since the great painters of the seventeenth and eighteenth centuries, Turquet de Mayerne, Petitot, and Thouron, have made a notable advance within the year, and are more than ever distinctly a work of fine art. In all improvement of this kind very much is due to the intelligent aid of the state, which has founded important schools of art applied to industry.

A more questionable experiment is the attempt to arrest the decline by agreements of the manufacturers to fix a scale of minimum prices for the various grades of goods. At best this can only avert the effects of competition at home, a small matter, since there is no considerable home market, while it forbids the individual manufacturer from meeting effectively competition abroad. The moment a minimum price is fixed here, say for a particular variety of Swiss watch, the American or English maker, having his work cut out for him, has only to put on the market a like article at a lower price.

With this general decline in prices there is one article of prime necessity which is daily growing dearer, until it has become an appreciable element in the cost of living and a serious check upon the industries of the country. I noticed in my last annual report the growing burden of taxation in this canton, due to the extensive works of public utility now in construction, and partly, according to the adversaries of the Government, to unsound finance and extravagant administration. To restore the equilibrium of the budget new taxes have been laid during the year, including a stamp duty of 10 centimes and a duty on bank circulation, and other important ones are proposed. In the Canton of Vaud a law of the most remarkable character was adopted in August, the distinctive feature of which is a progressive instead of a proportional duty on the capital of private fortunes; that is, the proportion of the duty to the capital increases with the amount of the capital.

I may add in conclusion that the Federal Government, which has always been a model of economical administration, is also growing more costly. The new customs tariff now covers every article of import, and although in many cases the rates are merely nominal, and for the purpose of furnishing the bureau of statistics with a record of the entry, in others they are high enough to have the effect of a protective duty.

There are signs also that the Government is quietly arming in face of the political situation of Europe, which must add to the military tax. On the whole it may be said that the happy superiority of the Swiss to his overburdened neighbors is no longer what it was a few years ago.

LYELL T. ADAMS,
Consul.

UNITED STATES CONSULATE,
Geneva, January 3, 1887.

ZURICH.

Report by Consul Catlin.

THE TRADE AND INDUSTRIES OF ZURICH.

If the commercial interests of Zurich for the past year be judged by the standard of its exports to the United States, the showing is an unfavorable one, the declared invoices at this consulate during the year ended September 30, 1886, being nearly $400,000 less in amount than those declared during the preceding twelve months (see Table I). This falling off was entirely due to a diminished export of silks, and this diminished export in turn was due to several causes, chief among which may be mentioned the activity of American competition, our high tariff, the persistent crusade against undervaluations, and a lessened demand in general, consequent upon the substitution of wool for silk in prevailing fashions.

THE ZURICH SILK INDUSTRY.

Speaking of the Swiss silk industry in general, the last annual report (1885) of the *Schweizerische Handels- und Industrie-Verein* says:

> During the past year our principal market for sales was the United States of America, but owing to the enormous 50 per cent. tariff, and to chicanery and delays, which have now become habitual over there in the collection of duties, as well as to this rapid increase of American production, this cannot much longer continue to be the case.

It need not, however, be inferred that the Swiss silk trade is entirely dependent upon its American orders. Rating the latter at 18, those from France may be placed at 15.5, from England at 13.7, and from Germany at about 7. The following table gives at a glance an interesting idea of the detail and extent of the Zurich silk manufacturer's relations with foreign markets, viz:

Shipments of silks from Zurich in 1885.

Countries.	Silks.	Half-silks.	Countries.	Silks.	Half-silks.
	Francs.	*Francs.*		*Francs.*	*Francs.*
Germany	6,918,800	567,379	West Africa	8,700	3,400
Austria	2,241,840	80,490	East Africa	4,400	.....
France	15,455,050	2,026,574	Asiatic Turkey	242,995	33,200
Italy	1,005,760	285,876	British India	298,030	270,350
Belgium	578,040	57,115	Dutch India	337,888	68,920
Holland	289,869	39,690	Eastern Asia	166,960	429,606
England	13,724,700	1,033,180	British North America	30,680	45,500
Russia	226,000	5,760	United States*	18,097,250	2,354,475
Sweden	254,020	15,160	Central America	58,850	4,200
Denmark	286,065	9,650	Chili and Peru	27,887	40,488
Portugal	26,109	4,866	Brazil	82,025	30,724
Spain	450,000	66,040	Argentine Republic	385,910	107,200
Greece	77,040	17,750	Other South American states	21,476	1,900
Danube countries	184,960	58,658	Australia	128,870	21,200
European Turkey	256,110	45,425			
Egypt	478,200	136,222			
Algiers and Tunis	396,320	31,973	Total	62,740,854	7,942,971

* Including the two consular districts of Zurich and Horgen.

Stated in round figures, Zurich shipped us through the consulate in 1883 two and a half millions, in 1884 two millions, and in 1885 one million six hundred thousand dollars' worth of silks, and from present estimates the decrease for the current year will prove to be in the same ratio. (See Table II.) So closely is the welfare of this community interwoven with that of the silk industry, prospering or languishing as it prospers or languishes, that a review of the former for any given period furnishes a pretty accurate idea of the entire business situation for the same time. I have therefore deemed it important to translate and append to this report (see Table III) a very full and interesting statistical statement recently issued by the Zurich Silk Industry Association. It shows a decrease during the last two years of 12 per cent. in the number of firms engaged in the business, of 22½ per cent. in the number of persons employed, and of 16 per cent. (or 3,487,747 francs) in the amount paid out for salaries and wages. Take away thus three and a half million francs in annual wages from a community of less than three hundred and fifty thousand population and the lack is certain to make itself painfully felt in all branches of trades. Throw ten thousand persons in the same community out of employment, compelling them either to seek for other work where all the trades are already full, to become a burden upon the remainder, or to go elsewhere and look for a living, and great distress is sure to ensue. Yet that is precisely what, according to the Silk Association's report, has occurred here in the Canton Zurich during the last two years.

ACTIVITY OF AMERICAN COMPETITION.

Chief among the causes to which the great shrinkage in Zurich's silk trade may be ascribed is the American competition in piece goods. During the three years ending December 31, 1882, our imports of silk piece goods at New York (where 95 per cent. of the silk goods sent to the United States are entered) averaged eighteen and a half million dollars annually, against less than fifteen millions annually for the three following years, or a falling off of about 20 per cent. Meanwhile our own silk production has been increasing proportionally. In 1880 the net value of our manufactured product was $34,519,723, against $33,305,460 of imports; in 1885 we manufactured over $50,000,000, against $25,000,000 of imports. In other words, where five years ago we supplied only one-half of our domestic demand we now supply two-thirds of it. The enterprise of the American silk industry is unsurpassed. During the last quarter of a century it has doubled the population of the great American silk-center, Paterson, which alone turns out over ten millions dollars' worth of finished silk goods annually. It has brought to our shores thousands of skilled European operatives, has been constantly developing new and advanced machinery and methods, and appears destined at no distant day to supplant the other great silk industries of the world.

SOURCES OF RAW-SILK SUPPLY.

Italy, China, and Japan are the great sources of supply of raw material to the silk manufacturers of Zurich, the former country having

supplied four-fifths of all the organzines delivered here in 1885. The following table gives the quantities and points of origin in detail, to wit:

Whence.	Organzines.	Trams.	Grège.	Total.
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*
France	2,283	739	971	3,993
Piedmont	19,305	714	104	20,123
Italy	242,985	72,934	12,196	328,115
China	17,433	109,079	32,311	158,823
Japan	13,161	142,733	31,728	187,622
Bengal	1,978	1,803		3,781
Various	6,287	1,686	1,038	9,011
Total	303,432	329,688	78,348	711,468

Of our own raw-silk supply, on the other hand, the last annual report of the Silk Association of America (1885–'86) says:

Within two years the relative proportions of raw silk received from different sources have somewhat changed. One-fourth of the whole supply continues to be of European production. The shipments from Japan have increased so that nearly one-half of the whole value of raw silk received at this market now comes from Yokohama. China furnishes the remaining fourth of our supply.

THE WAR ON UNDERVALUATIONS.

During the past three years persistent efforts have been made by the Treasury Department, in conjunction with our consuls at the various European silk centers, to break up the long established custom of undervaluing invoices of silk shipped to the United States. For this purpose silk experts are employed at such consulates, with instructions to examine minutely samples of every silk shipped, determine with all possible accuracy its cost of production, and report the same to the consul, who in turn transmits the calculation on each silk to the appraiser at the port where the goods are to be entered. To this end, shippers presenting invoices at the consulate for authentication are required at the same time to deposit duplicate samples of the silks invoiced. One of these samples is subjected to the expert's examination, the other accompanies the triplicate invoice to the custom-house at the port of entry in the United States, for a similar examination there by the appraiser's experts. By means of this double scrutiny, the actual value of the goods, estimated as to cost of production, is accurately determined, and the appraiser thereby enabled to decide to what extent the invoice has been actually undervalued. During the three years ending September 30, 1886, the expert at this consulate has thus examined upwards of 2,500 invoices of silks, upon which he has estimated a total undervaluation of $431,474.81, upon which, if concurred in by the appraiser, an additional revenue (at 50 per cent. duty) of $215,737.40 would accrue to the revenue of the United States. As showing these undervaluations more in detail, reference is made to Table IV appended to this report. It will be observed that the percentage of undervaluations has been forced down within the period stated to an average of less than 9 per cent. In this connection Sir William Schneider, the silk expert and deputy consul at this port, adds:

It will be noticed that the silk undervaluations during the past year have been somewhat less marked than in previous years, but this may be chiefly due to the fact that there has been a considerable fall in the value of silk stuff, and that it is found more profitable to undervalue on a high market than a low one. Nevertheless, it cannot be denied that for years past, *i. e.*, since the establishment of the United States

tariff, a number of silk shippers have persistently practiced undervaluation of their invoices. Differences as high as 20 per cent., or even higher, are not uncommon. Some few exporters have discovered that systematic undervaluations no longer result in any practical advantage, and have come to base their invoices, if not precisely on market value, at least approximately on cost of material and labor in the production of the goods.

In addition to the cause of the diminution of undervaluations previously noted, it may be stated that many Zurich exporters, who in former years regularly made large and, of course, undervalued shipments to the United States, have of late either greatly reduced or entirely discontinued them. Some half a dozen manufacturers who were engaged in the American trade have retired from it altogether, and to this fact the silk export from this consular district for the past year bears ample testimony. The falling off in Zurich's American silk trade finds a further explanation in the constantly increasing competition of American manufacturers, who inform themselves as to which of the Zurich wares are most in demand in their market, and then turn in and manufacture similar ones themselves.

THE COTTON INDUSTRY.

Shipments of cotton fabrics and yarn to the United States have increased considerably during the year ending September 30, 1886, amounting to upwards of $30,000 in value, as compared with about one-fifth that amount for the calendar year 1885. The cotton industry of Switzerland imports annually over 100,000 bales (of which America furnishes more than one-third and Egypt over one-quarter), and employs in all about 90,000 persons, as compared with 65,000 employed by the silk industry and 44,000 by the watch and jewelry interest. Zurich, in particular, has always supported a large cotton manufacture side by side with its silks. As long as a century ago it had, according to official count, 6,479 looms for muslin and indienne, and 30,000 hands employed at cotton-weaving. England is to-day, in this industry, Switzerland's principal competitor. Her cotton yarns, twists, raw fabrics, tulles, cambrics, and prints compete with the Swiss in every European market, while, strange to say, she is, on the other hand, next to ourselves, the largest importer of Swiss embroideries, of which she orders $6,000,000 worth annually. Thus English rivalry has either embarrassed or in great part displaced Swiss cottons in the best markets of Europe during the past decade. In other and neutral markets, however, the Swiss have held their own, with the exception of the east and west coasts of Africa, where their goods find a yearly diminishing demand, owing either to a lessened consumption or to a preference for the English goods. To sum all up, at the close of 1885, of 1,850,000 spindles in Switzerland, 200,000 were idle, and it is stated that several establishments, which, owing to the insolvency of their proprietors, would otherwise have come to a standstill, were only kept running by the banks, thus averting much misery and distress. The great cause for suffering in the cotton industry has been the depreciation in values.

THE WOOLEN INDUSTRY.

The shipments of all woolen goods from this consular district to the United States are comparatively insignificant in amount. Of silk and woolen mixed goods the amount sent last year was about $14,000, which, added to the all-woolen goods, make up a total of about $20,000 worth shipped. Of the raw material, Switzerland imports annually about $800,000, exporting in turn nearly $1,250,000 in yarn, four-fifths of which goes to Germany. The sources of raw supply are Australia, South Africa, and the La Plata region. Both in raw wools and yarns last year's business was an unfavorable one for this section, the fall of fully 20 per cent. in the former on the London market (at auction) making

itself felt throughout the trade. By many this sudden depreciation is ascribed to a caprice of fashion prescribing coarse stuffs instead of the finer ones for ladies' wear; further, that wool shared in the general decline which during the past year affected all leading articles of commerce. Yarn fell as much as 20 and even 25 cents per pound, according to number, and at the year's close these prices still held. This weakness in yarns is ascribable also to the decrees of fashion, the Swiss yarn machinery being so constructed as to render it incapable of delivering yarn such as is required to weave the coarser fabrics, and such as the French and English factories are constantly delivering. It resulted from this fact last year that at Gera and Greiz, two of the principal German centers for the delivery of Swiss yarns, half the looms were standing idle for months at a time, because there was no demand for cashmeres, merinos, &c.

STRAW GOODS.

In the adjacent Canton of Aargau, there are about forty firms engaged in the straw-weaving industry, and employing, during the winter, twenty thousand hands, with a total annual product of $1,000,000 and upward. The Isler straw factory at Wohlen, which ships largely to America, has been in operation there and owned by the same family since 1790, and the direct trade with New York, which dates from about 1840, has continued and increased up to the present day. In 1884 (September 30) the shipments were $20,000; in 1885, $45,000, and this year upwards of $55,000, all to New York. The principal article of manufacture and shipment is straw braids or tresses, the material used being rye straw, which, while preferred on account of cheapness, is however not available for making white, but only colored and mixed goods. This has developed the manufacture of Aargau specialties in straw-weaving, known as "fancy articles," "straw wires" and "borders," for which rye straw proves especially fitted. In manufacturing these, as long ago as 1845–'55, as many as 15,000 hand-looms were engaged.

Few industries are subject to more violent fluctuations than this one, dependent as it is upon a demand controlled more or less by the uncertain temperature of the seasons. "It is not to be disputed," remarks a writer on this subject, "that invariably, after a series of hot summers, light straws, especially yellow and white, come into fashion, and one is always more disposed to buy a high-priced straw hat when there is a prospect of a warm season."

Another very important branch of Aargau straw industry consists in the manufacture of what are known as "straw ornaments," such as buttons, acorns, sprigs, &c., which are largely used in connection with artificial flowers. These goods are mostly shipped to London and New York, but also, to some extent, to Germany.

It is impossible to obtain the total export or import of straw goods (or in fact of any other article) from or into this single section of Switzerland for any given period.

ANILINE COLORS AND OILS.

The Swiss tariff, which went into effect on January 1, 1885, and which reduced by one-half the entry duty collectible on nearly all chemical products, has, it is claimed, caused great distress and loss to domestic manufacturers in this branch of industry, by opening the door to a rush of German chemicals, especially sulphuric acid, which is brought in by rail, not in carboys as formerly, but in cars specially constructed for

the purpose, and somewhat similar to our petroleum-cars, with wrought-iron cylinders of about 10 tons capacity each.

There are, however, two sulphuric-acid factories in operation in this canton, but the import last year from Germany alone was over $60,000, and the same country sent into Switzerland during that period no less than $260,000 worth of aniline colors and oils. Where such conditions prevail, it is indeed not remarkable that the Swiss total exports of the latter foot up for the year only the pitiful sum of $34,000, of which only $11,000 went elsewhere than to Germany. From this consular district there were shipped to the United States only $2,440.91 of this line of goods.

The entire situation of the Swiss chemical industry may be summed up in a few words, viz, a ruinous low-entry duty and an overwhelming German competition. Moreover, the decline in the silk industry, affecting also silk dyeing and printing, has also had its appreciable influence upon the current demand for chemical products. As will be seen by the following table, there has been a steady fall in the average price of nearly all the leading articles during the past three years, viz:

Articles.	Price per 100 kilograms (220 pounds).		
	1883.	1884.	1885.
	Francs.	*Francs.*	*Francs.*
Sulphuric acid	12.00	11.00	10.00
Nitric acid	48.00	45.00	43.00
Salts acid	7.50	7.50	7.00
Vinegar acid	35.00	35.00	29.00
Salts of soda	28.00	20.00	18.00
Crystal soda	10.50	950–10.00	8.50
Glauber salts	11.00	11.00	8–9.00
Chalk	17–31.00	22–24.00	24.00
Iron vitriol	10.00	9–10.00	8–8.50
Copper vitriol	59.00	48–49.00	43.00
Sal ammoniac	54.00	48.00	41.00

THE COAL SUPPLY.

Switzerland's annual import of hard coal amounts to $3,000,000 in value, and her imports of coke, charcoal, briquettes, &c., to about a third of a million more. Of the hard coal nearly all comes from Germany, at an average cost of $4.25 per ton. The freight on a 10-ton car-load from the Saar coal mines of Prussia to Zurich, exclusive of the Swiss entry duty of 2 francs, varies from $2.60 to $2.73 per ton, according to place of shipment. Germany's efforts to send her coal across Switzerland, via the St. Gothard to Italy, have thus far met with but little success. Of Italy's $2,600,000 coal import in 1885, England furnished $2,250,000, and Germany only $70,000.

MACHINERY.

Switzerland imported $1,500,000 worth of all kinds of machinery, finished and unfinished, last year, and exported nearly three times that amount, including over $600,000 worth of looms and embroidery machines. Among her other exports may be mentioned 27 locomotives, mostly from Winterthur in this canton, also nearly 700 sets of mill machinery, which went to Russia. Schaffhausen, in this consular district, makes occasional shipments of heavy machinery to the United States, their value last year amounting to about $8,000. Many of the steamers on the Swiss lakes are run by engines constructed in this city, and everywhere on the busy railways are to be seen locomotives from the busy shops of Winterthur.

METALS.

Germany snipped to Switzerland last year, in round figures, nearly $3,000,000 worth of iron. Of the thinner kinds of sheet-iron, however, England furnishes the greater quantity used in this section, and double what Germany does. Belgium is also an active competitor. The precious metals come mostly from Italy and France, each of these countries having, during 1885, furnished over $2,000,000 worth of gold, silver, and platinum, either unwrought or in coins. It is difficult to state the Swiss product accurately, but competent authority estimates it from $80,000 to $100,000, or about one-half the demand. Prices remained last year generally unchanged, excepting in the case of nickel, which fell considerably, thereby bringing it within the range of a widely increased use for household and other purposes. The wages paid to Swiss metal-workers average from a quarter to a third per cent. higher than those paid in Belgium or Austria, but range about the same as those paid in Germany.

In this connection allusion may be made to the great success attained by the Swiss in the finer grades of metal work, namely, the manufacture of delicate scientific, astronomical, chemical, surgical, mathematical, and optical instruments. The total shipments of such last year amounted in values to nearly $200,000, of which $80,000 went to Germany, $60,000 to France, and the remainder to various other lands.

EARTHENWARE.

A certain marked increase of activity in building in this section of Switzerland has of late years given an impetus to the demand for bricks, tiles, cement, and other similar building materials. Bricks cost per thousand, delivered, in Zurich 40 francs, in Basle 28, in Lucerne 47, and in St. Gallen 50. In tiles there is a strong German competition, the duty being only one mark (25 cents) per 100 kilograms (220 pounds). Last year 1,100 car-loads, carrying 3,500 tiles each, were thus brought in from over the Rhine. The Swiss say that the German, in order to avoid overproduction, sells his tiles cheaper in Switzerland than he does at home. There is no reciprocal export thither in such articles. The German tile-maker has it all his own way. In earthen drain-pipes there was last year a dearth of demand, owing to the competition of cement and stone articles of the same description. The manufacture of stone tableware, which was formerly carried on actively in Zurich, is now only kept up in a few small shops, and still continues to dwindle from the same cause, a powerful competition from abroad.

Of the Swiss cement factories, it was estimated three years ago that their annual production was, in Portland cement, $444,000; in Roman, $180,000; and in hydraulic lime, $160,000; or a total of nearly $800,000. The annual import of Portland cement is $145,000; of Roman, $90,000; of quarry and building stone, $90,000; and of asphalt and similar material, $250,000. In this connection particular attention is directed to an article translated from the *Neue Züricher Zeitung*, of this city, in regard to cement competition, which appears in another part of this report.

WOOD AND WOODEN WARES.

The exports and imports in wood may be classified as follows: (*a*) for fuel, (*b*) for building purposes, (*c*) furniture, inlaid floors, ready-made chalets and fine wood carvings.

(*a*) The scarcity of fire-wood in Switzerland is illustrated by the fact that last year the import, which was mostly from Germany, amounted to nearly $500,000, the export to only one-fifth that amount.

(*b*) But in building material Switzerland has vastly the advantage, her exports being nearly double her imports, and amounting last year to over $1,000,000, of which half consisted of pine boards, shipped to France.

(*c*) The annual export of the goods classified as above under this head amounts to about $200,000, the import to $180,000. This, in view of the known expertness of the Swiss mountain wood-carvers, surprises one. But it is more or less explained by the following statements which I find in the last annual report of the *Schweizerische Handels- und Industrie-Verein*. It says:

> Consequently, for years past the sales of wood-carvings have been retarded, and that too, if not by domestic competition, at all events by the progress made through the great endeavors of foreign rivals. A further and principal reason is the change of styles in furniture. Wood-carving has lost the attraction of novelty which it possessed twenty, thirty, or more years ago; overproduction and excessive importation have not only greatly lessened people's liking for the goods, but, in many cases, have developed a positive antipathy. Articles which were formerly made almost entirely in wood are now, in many instances, made in metal, and all the more for the reason that the latter is more solid and astonishingly cheaper. In addition to these three principal reasons the high entry duty on large articles makes it in many ways impossible for us to deliver goods abroad, especially when the very same goods can be delivered here cheaper than elsewhere.
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> * * * * * * *
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> The golden times for wood-carving, when an expert and industrious carver could earn as high as 20 francs a day, are past. The best workman now averages 5 francs daily, and from that the prices paid dwindle down to the wages paid beginners, women, and girls, who, not unfrequently, after a day's work of ten to twelve hours come out with not over a franc earned, and are even glad when their embarrassed employer can pay them that in cash.

PAPER AND BOOKS.

In the matter also of paper supply Switzerland's balance in exports and imports is on the debit side. She imports, it is true, less material than she exports, *i. e.*, rags and fibrous substances, in the ratio of 9.8 to 29, Germany and France being the principal recipients of her cast-off favors of this character. But, as regards ready-made paper of all kinds, she imports $800,000 worth, or just double what she exports. In papers for printing, writing, drawing, &c., her shipments are indeed greater by two-thirds than her receipts. But this is more than compensated for by the excess of her imports on colored paper, tickets, pasteboards, and cards. Her principal article of competition with foreign manufacturers is paper for printing newspapers, and this has brought prices down during the past year to an unprecedentedly low price.

During the last two years book-printing in Switzerland, especially in respect to scientific, technical, and art works, and those pertaining to what are termed "Fatherland literatures," has taken a marked step forward. Newspaper literature has shown a less noticeable development. In this canton the authorities have of late years taken upon themselves the official publication of all books used in the public schools, thereby putting an effectual damper on private enterprise in this line. It is proper to mention in this connection that to a citizen of Zurich, Prof. Dr. Aloys von Orelli, is due the credit of originating the international copyright law.

The Swiss import last year of printed books, maps, &c., reached nearly $1,000,000, while the export was only one-half that amount, Germany taking the lead both as source of supply and recipient.

LEATHER.

Upon this branch of industry there is little to be added to the full report already made and published in No. 59 of the Consular Reports, unless it be to remark that the situation has not improved, but on the contrary grown worse, if anything, for the Swiss tanners who suffer under German competition, and the manufacturers and dealers who struggle under the disadvantages of the special treaty with France, which enables the latter country to undersell them on the finer goods here in their own market.

Last year's import of leathers, raw and finished, footed up a total of nearly $4,000,000, the exports $2,000,000.

CLOTHING.

Of clothing of all materials, cotton, linen, woolen, and silks, Switzerland imported last year about $4,000,000 worth, exporting during the same period less than $1,000,000; of hats, of all kinds, $1,000,000 imports, and less than $300,000 exports; of gloves, $200,000 imports, and less than $4,000 exports; and of shoes, of all kinds, $1,600 imports, and a trifle over $1,000,000 exports.

The greater part of the imported woolen clothing comes from Germany, the fine shoes from both Germany and France. The largest exports of fine shoes were to the Argentine Republic, England, and Egypt.

Prussia is gradually becoming the manufacturer of clothing for all Europe. In 1882 the largest percentage of her population employed in any single branch of industry was that engaged in the manufacture of clothing, namely, 17.41 per cent. No wonder, then, that overproduction causes enormous quantities of men's and women's wear to be launched at low prices upon the Swiss market. In this canton the domestic goods used for men's wear are mostly those known as "home-made," that is, made in the house of the wearer. The report previously quoted says:

> In Zurich the tailors stirred up a strike against a particular firm, though without sucess, on the ground that it employed none but German cutters; yet, spite of all their agitation, they failed to induce any of the Swiss workmen to join in the strike.

Two noticeable facts in the Swiss clothing trade are these, viz, that overcoats are coming more and more into use among the peasantry, and that owing to the spread of the railway system and the constant diminution of the number of teamsters, the traditional blue blouse has gone entirely out of use.

In women's suits, finished goods are imported from Berlin or Paris only in small quantities, as models. Ninety-five per cent. of the suits sold are finished here in Switzerland by the domestic firms. In cloaks, it is curious to note that Paris, once regarded as the center of the world's fashions, furnished Switzerland last year only one quarter, the remaining three-fourths coming from Germany.

In hats, Switzerland is overrun with wares from all four of the adjacent countries. Bazaars are established by agents from Berlin in all the larger cities and towns, offering at ridiculously cheap prices everything from a boy's hat up to the fashionable "beaver." With these goods, bought in great quantities at auction or bankrupt sales, no competition is possible. Italian peddlers, each provided with a horse and wagon and a couple of thousand or more hats, are traveling constantly through Switzerland, offering their goods at every peasant's door.

THE IMPORT OF STAPLES.

The import of the following seven leading staples into Switzerland during the past five years may be tabulated as follows, it being noted that the apparent excess in 1884 was due to the anticipated taking effect of the new tariff of January 1, 1885:

[1 metric centner = 220 pounds.]

Articles.	1881.	1882.	1883.	1884.	1885.
	Met. cent.	*Met. cent.*	*Met. cent.*	*Met. cent.*	*Met. cent.*
Coffee	97, 834	95, 489	95, 943	91, 763	89, 410
Sugar	270, 710	279, 681	295, 191	368, 172	268, 208
Rice	78, 810	77, 462	77, 843	80, 722	47, 757
Oil	97, 679	98, 052	101, 909	116, 562	74, 561
Alcohol	151, 775	133, 412	106, 206	119, 316	111, 143
Lard	51, 802	42, 232	50, 506	44, 216	37, 174
Petroleum	259, 013	278, 574	268, 423	331, 226	270, 027

Coffee.—Holland furnishes nearly one-quarter of the entire Swiss consumption. Then come in order Germany, Belgium, France, and Brazil.

Petroleum.—The importation of Caucasian petroleum, principally the brand "Palaschkowsky," of the Batoum Naphtha and Trading Company, has been actively pushed, but not as yet with entirely satisfactory results. The American petroleum still has the preference in the market.

OVERWHELMING GERMAN COMPETITION.

Taking now a general survey of the commercial and industrial situation in this section of Switzerland, as based upon the preceding statements and figures, we find everywhere present and dominant the determined pressure of German enterprise and competition flooding the land with all classes of her manufactures and products, and in most cases at the ruinous prices which inevitably follow overproduction. As a measure of self-protection, as a vital necessity in fact, Switzerland now seeks to frame a new tariff treaty with Germany, asking more favorable terms for the entry of her silks, cottons, cheeses, watches, and a few minor articles into the Imperial domain over the Rhine. But shrewd Germany demurs. Her present treaty with Austria expires at the end of next October (1887), and should she now make special concessions to the importunate Switzer how can she refuse similar ones next year to her Austrian neighbor, who will be equally importunate? But Switzerland is determined in her demand, and it is intimated that in case the desired concessions are refused she will declare a tariff war and impose a heavy duty on the chief German imports, including woolen goods and clothing. This would redound immensely to French interests in the Swiss markets, as Switzerland's special treaty with France has still five or six years to run.

Under these circumstances it is significant to read in a recent Berlin letter to the *Frankfurter Zeitung* that the Swiss-German Commercial Treaty Commission, which recently met in the former city to discuss a new tariff, has adjourned after three sittings, and that the Swiss delegates at once left for home. A tariff war between the two countries is a probability in the near future.

As showing how high public feeling is running here on this subject of German competition, I give herewith the translation of an article which

appeared a few days ago (November 8, 1886), in the *Neue Züricher Zeitung*, a leading journal of this city:

The German commercial treaty.—It is certainly most interesting to observe what weapons are being resorted to in this strife of interests. In the *Thonwaaren-Industrie-Zeitung* [the organ of the earthenware industry] of the 24th of July last, for instance, we find a report of the proceedings of the German Cement Manufacturers' Union. The presiding officer informed the meeting in strictest secrecy that he had addressed a lengthy communication to Prince Bismarck, the chancellor of the German Empire, on the subject of the tariff on cement. The German Empire finds it to its interest not to impose any entry duty on cement so long as Switzerland and Austria impose none. This is an exceptional case, as Switzerland usually imposes a very light and Germany a very heavy duty on this line of articles. And now, in the opinion of these gentlemen who, of all others, up to now, have been supplying Switzerland with cement and making life a burden to the domestic manufacturers, this exception should also be done away with. "We venture indeed to petition his serene highness to use the influence of the Imperial Government against Switzerland so as to effect a reduction in the present high duty. Possibly the expiration in 1886 of the existing commercial treaty with Switzerland may offer an opportunity for this action. We allow ourselves at the same time to call his serene highness' attention to the high duty imposed on cement by Austria, and to petition that measures may be taken for its reduction." Thus, in one breath, is attention directed to Austria's conduct, and the aid of the Empire invoked against Switzerland. Such a thing might do very well in regard to the Congo State or Cameroon, but even in that case diplomacy would be shy about saying so.

THE SWISS VIEW OF IT.

I remarked above that the declaration of a tariff war by Switzerland on Germany seems a near probability. As confirmatory of this view, I find that a meeting was held at Olten, near here, a day or two ago, to discuss this question and take vigorous action. It was composed of a hundred and fifty leading and representative men, and presided over by an ex-Federal councilor of this city. The result was the unanimous recommendation of an amendment to the tariff, empowering the Federal Council to impose a fourfold entry duty upon all goods coming into Switzerland from countries with which no special treaty exists, or which themselves impose an inordinate duty upon foreign products. This, if adopted, means a tariff war to the knife. The chief speaker of the meeting set forth so eloquently and forcibly Switzerland's position in this matter that I give herewith a *résumé* of his speech.

Swiss exports [he said] are constantly decreasing. The year 1885 closed with a deficit of 95,000,000 francs. These deficits, in case they recur regularly, involve serious peril for our land. The so-called foreign industry cannot make them good; its importance is greatly overrated; Switzerland can only hold her own by raising her tariff. We are free-traders, but only so long as the others are. If they are protectionists they have a right to be; we do not seek to compel the other countries to close their doors to us, but we will not keep ours open to them. Shall we let ourselves be driven to the wall in the defense of an untenable principle? Switzerland has it in her power to better her position. As to our relations with Germany we need not worry. We regard a renewal of our commercial treaty with her in its present form not merely with indifference but with opposition. Of Austria's products, which are mostly agricultural, we have no need whatever. Austria must come to us, not we to her. In our intercourse with Italy we have a deficit of 52,000,000 francs, which must be looked into carefully. Nevertheless we import great quantities of articles which can just as well be furnished in Switzerland. It is nonsense to import flour while ruin stares our Swiss millers in the face. Our malt and brewing industry is flourishing, and renders foreign imports in that line useless. The tobacco we manufacture satisfies the most fastidious smoker, and so a long list of other articles might be cited which we have no good ground for importing from abroad. It looks as if an effort were being made to drive us by force into the arms of our neighboring states. If we don't know how to protect our domestic industries any better than this, let us save the money we are spending on our army and leave Helvetia to God's providence and to the confusion of mankind.

AGRICULTURE.

According to the Swiss census of 1880 only one-fifth of the population depends upon agricultural pursuits for a living. Of a total area of 15,991 square miles, about 70 per cent. only is classed as productive area, and of that about three-fourths consists in farms, gardens, and pastures.

Last year the wheat and corn crops were unusually good, amounting to something over 41,741 tons. Rye fell off somewhat, yielding 31,919 tons. Of barley there was a full crop, estimated at 7,366 tons. The entire grain crop amounted to 115,400 tons, representing a value of $8,000,000. But the imports for the same period amounted to $16,000,000 worth of grain and flour, or double the amount produced. The exports were practically nothing, owing to the high duties imposed at all the neighboring frontiers. For instance, Swiss flour entering Germany pays 85 cents duty on the 100 pounds, while German flour entering Switzerland pays only about 11 cents duty on the same amount.

I append (as Table V) to this report a statement showing the movement of prices for grain, flour, and bread during 1885, as quoted by the Zurich Grain Exchange.

THE VINTAGE.

In this consular district, and especially on the slopes overlooking the Rhine and the Lake of Zurich, the cultivation of the grape is closely identified with the agricultural interests. I have been at some pains to obtain a definite statement concerning this year's (1886) vintage, and am indebted to the Rev. Dr. Kubler, of Neftenbach, the Federal and cantonal expert, for the following information. He writes me that—

> The vintage in Northeastern Switzerland this year discloses such a variety of results as have never before been recorded. In quantity the yield varies from 1 to 20 hectoliters [22 to 440 gallons] per juchart of 36 ares [three-quarters of a square acre], and between these two extremes all possible variations of yield are reported. In quality the white rates at 60–75 degrees Ochsler, the red, where gathered ripe, at 70–90 degrees. In the inferior qualities about 1.8 per cent. acid is found. In prices the white varies from 26 to 30 francs per hectoliter [22 gallons], and the red from 40 to 90 francs.
>
> The failure of the vintage is due to heavy May frosts, cold rains during the budding season, and mildew.

CATTLE AND CATTLE-BREEDING.

The profits of the cattle-trade of this section of Switzerland were even less satisfactory in 1885 than they had been in the previous year. The number exported rose, it is true, from 67,127 in 1884 to 74,497 in 1885, while the import fell from 126,236 to 79,833; yet, notwithstanding this, the net proceeds of the year's business showed a decrease. It is estimated that the decrease in value on milch and beef cattle in the year 1885 for all Switzerland averaged nearly $20 per head.

Prices range about as follows: Handsome young cows, 1,200 to 1,300 francs per pair; middling, 900 to 1,100; cows with calf, three-yearlings, 450 to 600; one to two year olds, 160 to 350; young oxen, one to one and a half years old, 300 to 600.

Last fall at the cantonal (Zurich) cattle show in Wadensweile, near this city, a total of 9,200 francs was paid out in premiums for breeding-cattle of the brown (*Braunvieh*) and spotted (*Fleckvieh*) stocks; also 460 francs to swine-breeders and 560 francs to goat-raisers.

Last year the Federal Government also appropriated 10,000 francs for premiums for cattle-breeding, of which 965 francs are allotted to Canton Zurich.

Inquiries from the United States for Swiss cattle occur occasionally. One enthusiastic stock-breeder from Connecticut scoured this section of Switzerland last summer, camping out with the herdsmen in the Graubunden Mountains, and making a thorough inspection of the various purchasable stocks.

It is of interest in this connection to mention that Switzerland last year supplied 15,000 beef cattle to Germany, and 22,000 milch cattle to Italy.

TOBACCO CULTURE.

Of late years, both in this section and in the neighborhood of Lausanne, Switzerland has begun to raise considerable tobacco. Last year's crop is roughly estimated at 1,900 tons. Consumption fails, however, to keep pace with production, which serves to increase the stock of the domestic product on hand, pushes down the price, and so comes back ultimately upon the workman, while the manufacturer is compelled to use better, *i. e.*, imported, material. Statistics show that the average cost of cigars and cigarettes (packages) brought *into* Switzerland is 19 centimes (3.6 cents), while that of those shipped *from* Switzerland is less than 2 cents (9 centimes) apiece. The import of tobacco leaf last year was $1,100,000, the export only $50,000; of smoking-tobacco and snuff, import, $48,000, export, $40,000; of cigars and cigarettes, import, $680,000, export, $400,000.

FINANCIAL.

The rates of discount during the first nine months of the present year (1886), as quoted by the Zurich Kantonal Bank, have been as follows:

Period.	Rate.	Period.	Rate.
	Per cent.		*Per cent.*
January 1 to February 2	3	April 22 to May 9	4
February 3 to March 10	3½	May 10 to May 19	3½
March 11 to April 4	3	May 20 to June 6	3
April 5 to April 21	3½	June 7 to September 30	2½

Averages.

Years.	Rate.	Years.	Rate.
	Per cent.		*Per cent.*
1885	3.11	1881	4.11
1884	2.91	1880	2.92
1883	3.02	1879	3.33
1882	4.51		

LOANS ON COLLATERALS.

The rate of interest on collateral loans during the first nine months of the present year (1886) has varied as follows, viz:

Period.	Rate.	Period.	Rate.
	Per cent.		*Per cent.*
January 1 to February 3	3½	April 24 to May 9	4½
February 4 to March 10	4	May 10 to May 19	4
March 11 to April 4	3½	May 20 to September 30	3½
April 5 to April 23	4		

Averages.

Years.	Rate.	Years.	Rate.
	Per cent.		*Per cent.*
1885	3.75	1881	4.76
1884	3.70	1880	4.24
1883	4.7	1879	4.55
1882	5.12		

MORTGAGES.

On the 1st of January of the present year the three Zurich banks lending money on real-estate mortgages reported 120,835,224.41 francs so invested, as compared with a total of 123,960,744.40 one year before. The bulk of this amount, viz, 113,234,838.44, was invested at over 4 per cent.

CURRENT ACCOUNTS.

The fluctuations of interest on current accounts during the first nine months of this year are quoted as follows, viz:

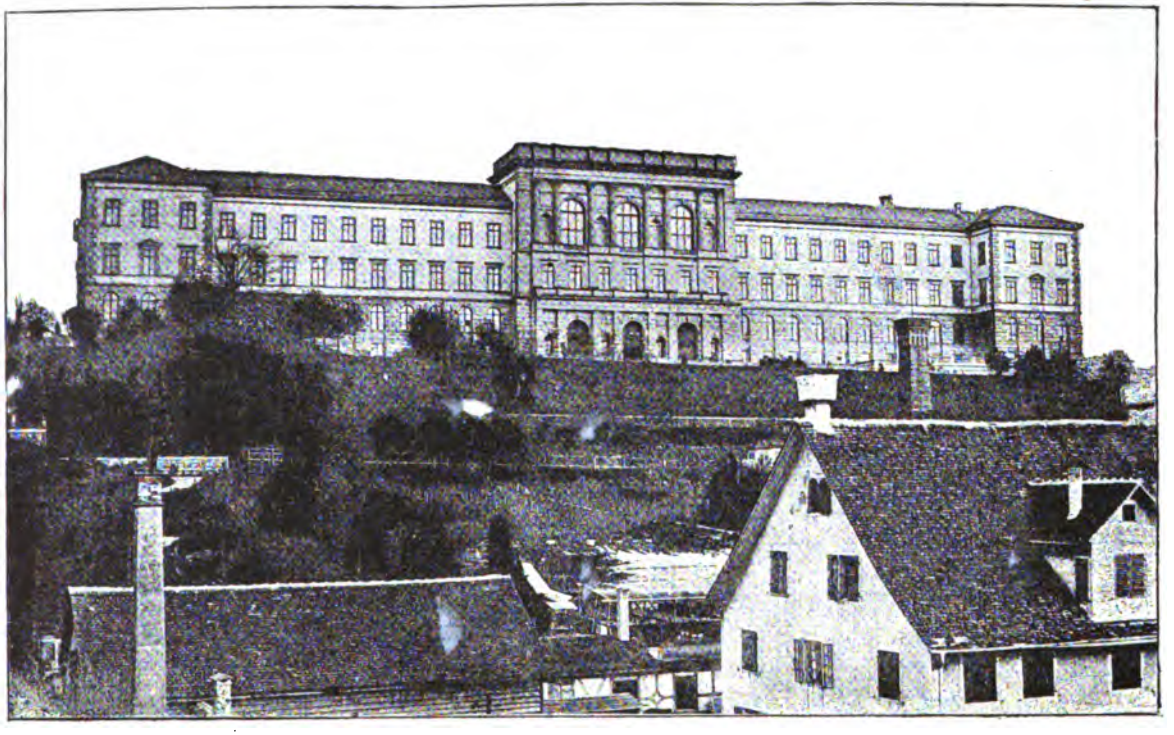
Period.	Checks.	Credits.	Debits.
	Per cent.	*Per cent.*	*Per cent.*
From January 1 to April 30	1½	2½	4½
From March 1 to May 30	2		
From May 31 to September 30	1		
Average:			
1885	1.43	2.58	4.35
1884	1.33	2.54	4.5
1883	1.68	2.73	4.54
1882	2.77	3.79	5.28
1881	2.47	3.26	4.74
1880	1.57	3.01	4.67
1879	1.87	3.08	4.85

RATES OF EXCHANGE.

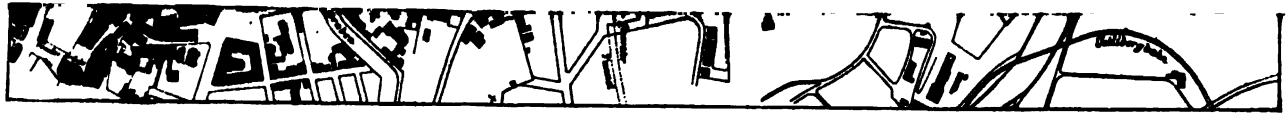
The rates of exchange on England, France, Germany, Italy, and Austria, together with the quoted values of all leading securities, given by months during the year, will be found set forth in Table VI, appended hereto. In Table VII is given also a statement of the condition and solvency of all the banks in Canton Zurich at the close of last year.

TRAFFIC.

The Northeastern Railway of Switzerland, with its leased lines, Sulgen-Gassau and Effretikon-Hinweil, controls the traffic of this section, operating in all 541 kilometers (336 miles) of road, together with steamboat service on the lakes of Zurich and Constance. I forward herewith a copy of the company's last annual report, showing the increase of its passeng er business in 1885. The connection with Northern Italy, via the Gothard road, and with the Austrian Tyrol, Salzburg, and Vienna, via the recently opened Arlberg route, have made Zurich an important railway center for through travel. Through trains run from Berlin, via Stuttgart and Zurich, to Milan, and there are direct sleeping and parlor cars from Zurich to Vienna. These increased facilities have already shown their results in the increased number of tourists visiting Zurich during the past season, and are destined, in conjunction with the strenuous efforts made by the local authorities for the improvement and beautifying of the city itself, to render Zurich a formidable rival to



FEDERAL POLYTECHNIC SCHOOL, ZURICH.



VIEW OF QUAY AND NEW BRIDGE, ZURICH.

Lucerne and Geneva as a resort for summer pleasure-seekers from foreign lands. In order to encourage this movement and render strangers' stay in Zurich agreeable, a large number of public-spirited citizens have during the last season organized a commission and opened an office in the Exchange, where all information relative to railway and the steamboat connections, hotels and boarding-houses, shops, amusements, points of interest, &c., may be had by visitors in any language and free of cost.

Last year's passenger business on the Northeastern Railway amounted to 5,125,485.10 francs ($1,000,000 in round figures), being an increase of 226,880.62 francs over the previous year's business. There was also an increase of upwards of 26,000 francs in the receipts from the transport of baggage, showing an undoubted increase of tourist travel in this section. A proposition looking to the repurchase of this road by the Swiss Government is now before the Federal authorities at Berne.

I append as Table VIII a statement showing the aggregate receipts of all Swiss railroads from passengers and freights during the first nine months of the present year (January 1 to September 30, 1886).

EDUCATIONAL MATTERS.

The official educational report of last year for the Canton Zurich places the attendance at the public schools of children between six and fifteen years at 58,972, with 1,483 teachers, and at private schools 1,746 children, with 138 teachers; a total of 60,718 children and 1,621 teachers. This shows an increase of 1,459 pupils and 77 teachers over the report of the previous year. The canton is divided into 11 school districts, and these in turn into 191 school wards. There are 54 schools and kindergartens for small children, employing 70 female teachers and attended by 2,913 pupils. In the high school, for the summer season of 1886 there were 471 (including 53 female) students, of whom 17 (5 male, 12 female) were from the United States, and pursuing courses either in medicine or philosophy. The total Government outlay for educational purposes in the canton during the year was 1,898,606.84 francs, an increase of 23,032.80 francs over the previous year's expenses.

The silk-weaving school, which has been in operation in this city for five years past, reports an attendance of 33 scholars, with 4 teachers. It is required that pupils on entering shall have attained their sixteenth year, the course being divided into two classes. By a generous subvention from the Federal Government young men of intelligence, but without means, are admitted and assisted to complete the courses. The school is well equipped, and has already done good work in diffusing a practical knowledge of weaving.

During the present season the new chemical-school building in this city has been thrown open for use.

PUBLIC WORKS AND IMPROVEMENTS.

The outlays of the Canton Zurich on its turnpikes amounted in 1885 to 144,561.63 francs, and on its river-fronts (Limmat, Töss, Thur, Rhine, Glatt, and Sihl), 377,347.93 francs. The new building for physic and physiology in this city was completed at a cost of 248,845 francs; and in addition to these principal expenditures various minor sums were laid out upon the public schools, churches, and hospitals.

Building in Zurich and its outlying townships is surprisingly active. At every turn the passer-by sees new buildings, in most cases substantial ones, in course of erection. The section of the city fronting upon the lake of Zurich is rapidly becoming a marvel of architectural beauty;

scores of old buildings have been or are being demolished, and upon their sites solid blocks of four or five storied granite edifices, built in the most substantial and tasteful styles, are being put up and occupied as soon as completed. This development is consequent upon and in connection with Zurich's quay improvements, which have been in progress since 1881 and are now finally nearing completion. This great undertaking, which will cost, when finished, nearly 7,000,000 francs, has already transformed Zurich into the most beautiful and attractive of all the Swiss cities. This great engineering achievement, after five years' labor by an army of workmen, has completely transformed the lake front of the city, has reclaimed from the waters of the lake a continuous promenade of 3 miles and a park of some 20 acres, planted them with full-grown forest trees and all varieties of Alpine plants and mosses, and thus given to residents and visitors a public resort unsurpassed in picturesqueness and beauty.

GEORGE L. CATLIN,
Consul.

UNITED STATES CONSULATE,
Zurich, November 11, 1886.

Silk and total exports from Zurich, by years, since 1883.

Year.	Silks.	Total.	Decrease from previous year.
1883	$2,502,407 73	$2,586,344 42	.....
1884	2,016,248 88	2,084,892 05	$451,452 37
1885	1,606,338 90	1,807,724 42	277,167 63

Statistical report of the Silk Industry Association of the Canton of Zurich for the calendar year 1885.

Items.	Difference in per cent. from 1883.	1885.	1883.	1881.
SILK GOODS, MANUFACTURE OF.				
Dress-goods factories ..... number.	−10.7	84	94	91
Winders employed December 31 ..... do..	−18.4	5,420	6,644	6,433
Winding machines (round and mechanical) ..... do..	.....	4,209	.....	.....
Throwing frames, December 31 ..... do..	−30.2	472	676	682
Mechanical throwing machines, December 31 .... do..	−17.1	623	752	665
Hand-weavers, male and female, December 31:				
In Canton Zurich ..... number.	.....	11,959	17,925	19,168
In other cantons ..... do..	.....	8,122	11,791	11,230
Across the frontier	−32.1	84	.....	.....
	.....	20,165	29,716	30,398
Hand Jacquard looms, December 31 ..... number.	.....	628	.....	.....
Hand velvet looms, December 31 ..... do..	.....	15	.....	.....
Mechanical looms, December 31:				
For smooth and twilled textures, December 31 ..... number.	.....	3,891	.....	.....
Jacquard looms ..... do..	.....	193	.....	.....
Velvet looms, December 31 ..... do..	.....	45	.....	.....
	+3.00	4,129	4,007	3,151
Hands employed (including overseers, winders, throwers, frame-cleaners, counters, spoolers, weavers, piece-cleaners, piece-layers, fitters, setters, turners, sheet-makers, and others) .. number.	.....	5,563	.....	.....
Employés, not included in the foregoing list, viz book-keepers, correspondents, clerks, apprentices, substitutes, employés in the fitters, winders, porters, &c ..... number.	.....	837	2,430	1,785
	.....	6,400	.....	.....

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Statistical report of the Silk Industry Association of the Canton of Zurich, &c.—Cont'd.

Items.	Difference in per cent. from 1883.	1885.	1883.	1881.
SILK GOODS, MANUFACTURE OF—Continued.				
Weight of goods manufactured:				
Raw-worked grèges and ouvrées.....kilos.	.....	88, 064	.....	.....
Organzines in color.....do..	− 19.4	328, 725	408, 034	396, 636
Trams, in colors.....do..	− 22.7	332, 269	429, 797	356, 311
Spun silks, in colors.....do .	+134.8	7, 732	3, 298	1, 181
Raw worked wools .....do..	.....	164	.....	.....
Wools, in colors.....do..	.....	10	.....	.....
Raw worked cottons .....do..	.....	93, 077	.....	.....
Cottons, in colors.....do..	− 26.6	170, 388	231, 973	262, 238
Pieces delivered.	.....	1, 021, 029	.....	.....
Smooth goods (taffetas):				
Marceline and lustrine appretée (gros d'Orient) .....No. pieces.	+ 11.00	29, 075	26, 177	18, 673
Poult de soie and faille color (80.3 threads)..do..	− 73.2	10, 621	39, 682	31, 189
Faille color above 80.3 threads.....do..	− 82.00	703	3, 925	3, 270
Black goods trammed (cuit).....do..	− 56.4	6, 192	14, 268	11, 095
Black goods, souple or dous (80.3 threads)...do..	− 48.5	10, 556	20, 481	12, 616
Black goods, souple or dous (over 80.3 threads).....No. pieces.	− 43.6	18, 162	32, 211	21, 958
Umbrellas, all silk (taffetas) .....do..	−100.00	.....	1, 159	260
Fancy silks (taffetas) rayé and cadrillé, Louisine, all silk .....No. pieces.	− 59.4	24, 697	60, 836	13, 918
Taffetas (cottons (mixed).....do..	− 20.9	8, 081	8, 894	8, 695
	− 51.00	103, 087	202, 073	116, 673
Thread goods:				
Umbrellas, all silk (thread texture) ..No. pieces.	.....	2, 935	.....	.....
Umbrellas, half silk (thread texture) .....do..	.....	1, 713	.....	.....
	+ 1.5	4, 648	4, 578	7, 278
Cotton-mixed thread goods, black and colored satin tramé, cotton, &c., but not including umbrella stuffs.....No. pieces.	− 32.5	48, 649	72, 100	109, 086
Serges, surahs, all silk, uni, rayé, cadrillé, black and colored (not including umbrella stuffs)..No. pieces.	+ 39.00	46, 660	33, 194	39, 878
Other kinds of all silk dead goods (satin merveilleux, rhadamés, duchesse, satin or chiné, tricotine, ottoman, faille française, Pekin, armures, &c. (not including umbrella stuffs).....No. pieces.	+ 96.5	97, 614	49, 621	72, 636
Cachenes, all silk (neck handkerchiefs, cravats, lustrine or bordered caffetas.....No. pieces.	− 2.5	52, 781	54, 092	66, 445
Jacquard goods:				
Cravat stuffs, &c.....No. pieces.	.....	9, 683	.....	.....
Cachenes façonné .....do..	.....	9, 378	.....	.....
Damassé .....do..	.....	8, 289	.....	.....
	+52	27, 350	18, 004	13, 721
Raw woolen stuffs:				
Bolting cloth .....No. pieces.	.....	6, 733	.....	.....
Dyed in the piece.....do..	.....	40, 025	.....	.....
	+20.3	46, 758	38, 854	17, 586
Velvets and plushes:		7, 861		
Received.....No. pieces.	−17.7	404, 638	472, 546	443, 303
Looms, reckoning one mechanical loom as equivalen to three hand-looms .....number.	−20.4	33, 195	41, 737	39, 851
Employés and hands .....do..	.....	32, 457	43, 265	42, 425
Salaries and wages paid .....francs.	−17.	14, 853, 143	17, 906, 527	16, 353, 127
SILK TWISTS.				
Silk-twisting establishments.....number.	−15.75	16	19	22
Hands employed.....do..	− 7.9	4, 430	4, 810	5, 131
Weight of trams produced.....kilograms..	−30.	133, 569	190, 746	154, 196
Weight of sewing silk produced.....do..	+ 6.9	99, 912	93, 490	73, 301
Employés (not including "hands" as above).number.	−33.	79	118	126
Salaries and wages paid.....francs	−19.9	1, 539, 120	1, 934, 605	1, 674, 326
SILK-DYEING.				
Dyeing establishments .....number.	−20.	8	10	10
Hands employed .....do..	− 1.2	981	993	987
Employés (not including "hands" as above)....do..	−12.9	27	31	36
Weight of finished raw silk dyed:				
Colored.....kilograms.	− 6.7	234, 227	304, 661	281, 608
Black .....do..	+12.	230, 723	205, 917	288, 314
Salaries and wages paid.....francs.	− 2.16	1, 000, 661	1, 022, 748	1, 006, 649

Statistical report of the Silk Industry Association of the Canton of Zurich, &c.—Cont'd.

Items.	Difference in per cent. from 1883.	1885.	1883.	1881.
FLORET-SPINNING.				
Spinneries ..... number.	.....	5	5	5
Hands employed ..... do..	− 0.7	815	821	880
Weight of yarn produced ..... kilograms..	+14.7	128, 836	112, 330	110, 114
Employés (not including "hands" as above). number.	−73.1	25	93	24
Salaries and wages paid ..... francs.	+ 0.2	547, 371	546, 324	541, 192
FINISHING ESTABLISHMENTS.				
Establishments ..... number.	−25.	6	8	6
Hands employed ..... do..	− 0.4	252	254	190
Employés (not including "hands" as above) .... do..	+54.5	17	11	17
Pieces pressed ..... do..	−13.1	154, 629	177, 960	95, 106
Pieces finished ..... do..	+11.2	113, 784	103, 263	118, 419
Salaries and wages paid ..... francs.	− 5.8	290, 582	308, 420	240, 159
SILK-DYEING ESTABLISHMENTS, ZURICH.				
Organzines ..... kilograms.	− 4.1	301, 114	313, 971	369, 006
Trams ..... do..	−14.4	327, 007	382, 165	364, 905
..... do..	−63.3	277	755	1, 522
Trèges ..... do..	+42.1	77, 659	54, 634	38, 764
RECAPITULATION.	−6.	706, 057	751, 525	794, 197
Firms employed in the silk industry of the Canton Zurich ..... number.	−12.	119	136	134
Employés and hands ..... do..	−22.5	39, 084	50, 396	49, 816
Salaries and wages paid ..... francs.	−16.	18, 280, 877	21, 718, 624	19, 815, 453

REMARK.—In regard to the wages paid, the fact must not be lost sight of that the greater portion of the hand-weavers only weaves in winter, and that in many cases the same winders are employed by two different concerns, and hence appear twice in the returns.

Silk undervaluations at Zurich, year ending September 30, 1886.

Period.	Original invoiced values.	Values as determined by experts.	Difference showing undervaluation.	Difference showing undervaluation.	Percentage of undervaluation.	Additional duty collectible on undervaluations at 50 per cent.
Quarter ending—	*Francs.*	*Francs.*	*Francs.*			
December 31, 1885...	1, 618, 503 40	1, 759, 895 90	141, 392 50	$27, 288 75	8. 53	$13, 644 38
March 31, 1886	1, 892, 706 90	2, 112, 037 85	213, 330 95	41, 172 87	11. 54	20, 586 43
June 30, 1886	986, 548 95	1, 062, 974 50	76, 425 55	14. 750 12	7. 89	7, 375 06
September 30, 1886 ..	1, 558, 155 20	1, 675, 924 80	117, 769 60	22, 729 54	7. 68	11, 364 77
Total for year.	6, 061, 914 45	6, 610, 833 05	548, 918 60	105, 941 28	8. 9	52, 970 64
September 30, 1885..	8, 129, 102 50	9, 005, 582 80	876, 480 30	169, 151 03	10. 53	84, 575 52
September 30, 1884..	.....	.....	810, 272 03	156, 382 50	.....	78, 191 25

Prices of grain, flour, and bread, during 1885, *as per quotations from Zurich Grain Exchange.*

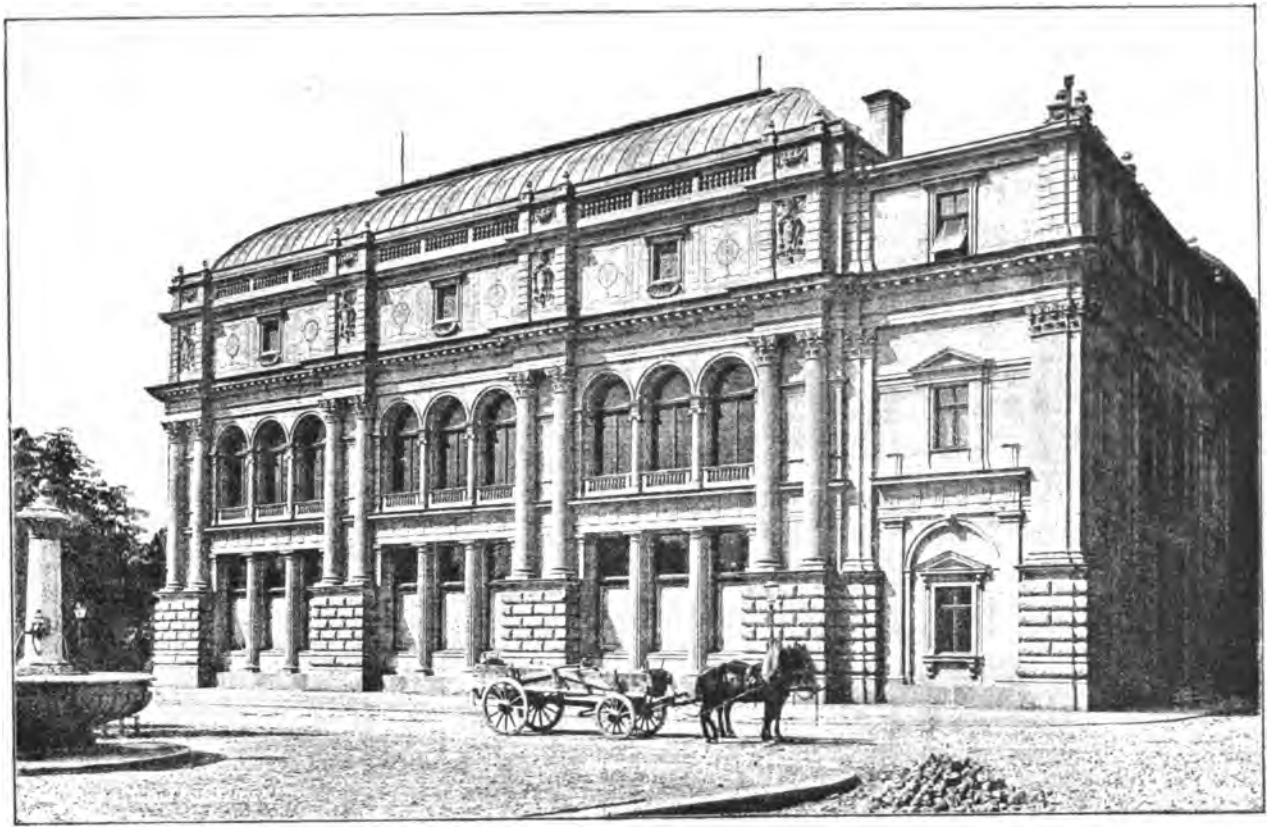
[Per 100 kilograms = 220 pounds.]

Months.	Wheat.	Barley.	Oats.	Corn.	Flour.	White bread.	Middling bread.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*	*Cent's.*	*Cent's.*
January 2	22.00	24.00	19.00	19.00	34.00	43	38
9	22.25	24.00	19.00	18.50	34.00	43	38
16	22.50	24.00	19.00	18.50	34.00	43	38
23	23.00	23.00	19.00	18.50	35.00	43	38
30	23.00	23.00	18.50	18.00	35.00	43	38
February 6	23.00	22.50	18.50	18.00	35.00	43	38
13	23.00	22.50	19.00	18.00	35.00	43	38
20	22.50	22.50	19.00	18.00	35.00	43	38
27	22.50	22.50	19.50	18.50	35.00	43	38
March 6	23.00	23.00	19.50	18.50	35.00	43	38
13	22.50	23.00	19.50	18.50	35.00	43	38
20	23.00	23.00	19.50	18.50	35.00	43	38
27	23.00	23.00	19.50	19.00	35.00	45	38
April 4	23.50	23.00	19.50	19.00	35.00	43	38
10	24.00	23.00	19.50	18.50	37.00	43	38
17	24.50	23.00	20.00	18.00	37.00	43	38
24	24.50	23.00	20.00	18.00	37.00	43	38
May 1	25.00	23.00	20.50	18.50	36.50	45	40
8	25.50	23.00	21.00	19.00	36.50	45	40
15	25.50	.....	21.00	19.00	36.50	45	40
22	25.00	.....	21.00	18.50	36.50	45	40
29	24.50	.....	20.50	18.50	36.50	45	40
June 5	24.00	.....	20.50	18.50	36.50	45	40
12	24.00	.....	20.50	18.50	36.50	45	40
19	24.50	.....	20.00	18.00	36.50	45	40
26	24.00	.....	19.50	18.00	35.50	45	40
July 3	23.50	.....	19.00	18.00	35.00	45	40
10	23.00	.....	19.00	17.50	34.00	43	38
17	23.00	.....	19.00	17.50	34.00	43	38
24	23.00	.....	19.00	17.00	34.00	43	38
31	22.50	.....	18.50	17.00	34.00	43	38
August 7	22.00	.....	18.00	17.00	34.00	43	38
14	21.50	.....	18.00	16.50	33.00	43	38
21	21.50	.....	18.00	16.50	33.00	43	38
28	21.50	.....	18.50	17.00	33.00	43	38
September 4	21.50	21.50	17.50	17.00	32.00	43	38
11	21.50	21.50	18.00	17.00	32.00	43	38
18	21.00	21.50	17.50	17.00	32.00	43	38
25	21.50	21.50	18.00	17.50	32.00	43	38
October 2	22.00	21.50	18.00	17.00	32.00	43	38
9	22.50	21.00	18.00	17.50	32.50	43	38
16	22.50	21.50	18.00	17.50	32.50	43	38
23	22.50	24.00	18.00	17.50	32.50	43	38
30	22.50	22.50	18.00	18.00	32.50	43	38
November 6	22.50	22.50	19.00	17.50	32.00	43	38
13	22.00	22.50	18.50	17.50	32.00	43	38
20	22.00	22.50	19.00	17.50	32.00	43	38
27	22.00	22.50	18.50	17.50	32.00	43	38
December 4	22.00	22.00	19.00	17.50	32.00	43	38
11	21.75	22.50	18.50	17.50	32.00	43	38
18	21.50	21.50	18.00	17.50	32.00	42	37
29	21.00	21.50	18.50	17.50	31.50	43	37

Prices of exchange and leading stocks at Zurich, by months, during 1885.

Stocks, &c.	January 1.		February 1.		March 1.		April 1.		May 1.	
London, short sight	25.32 to	25.39	25.35 to	25.42	25.38 to	25.44	25.37 to	25.44	25.36 to	25.44
France, short sight	100.05	100.25	100.20	100.40	100.15	100.35	100.10	100.25	100.25	100.40
Germany, short sight	123.90	124.30	124	124.40	123.75	124.15	123.80	124.20	124.20	124.60
Milan, short sight	99.90	100.10	100	100.20	99.75	100.05	99.65	100	99.30	99.90
Vienna, short sight	205	206.50	204.50	206	204	206	204	206	200	202.50
4½ per cent. N. E. Railway bonds	100.5	102	101	103	101.7	103.1	105.5	101.9	100	101.8
5 per cent. Gotthard Railway bonds	100.6	105	100.6	105.7	100.3	105.5	100	105	100	105.5
4 per cent. Gotthard Railway bonds	97	98	99	99.3	98.5	99	98.2	98.5	96.9	97.1
Stock of Northeastern Railway:										
Original	304	306	303	305	316	319	307	310	274	276
Preferred	630	...	635	640	663	...	...	685	625	640
Stock of Gotthard Railway	530	535	550	555	551	556	530	536	510	522
Stock of Central Railway	458	464	450	455	462	...	450	457	440	446
Stock of United Swiss Railway:										
Original	328	332	330	333	336	337	330	336	303	305
Preferred	505	512	522	530	530	535	...	...	520	530
Stock of West Railway:										
Original	104	110	109	110	133	135	129	133	112	115
Preferred	...	...	...	...	375	390	350	365	315	...
Stock of Jura-Bern-Luzern Railway	356	362	356	363	357	362	350	357	335	347
Stock of Wädensweil-Einsiedeln Railway	95	100	105	115	110	120	115	120	120	140
Stock of Arth-Rigi Railway	117	120	129	133	138	140	135	137	120	125
Stock of Schweizer. Kreditanstalt	645	655	670	680	670	675	640	655	620	630
Stock of Bank in Winterthur	412	...	420	425	408	413	400	...	401	...

Stocks, &c.	June 1.		July 1.		August 1.		September 1.	
London, short sight	25.25 to	25.33	25.22 to	25.29	25.21 to	25.28	25.23 to	25.27
France, short sight	100.25	100.40	100.15	100.35	100.20	100.35	100.17	100.27
Germany, short sight	123.80	124.25	123.75	124.15	123.80	124.20	123.90	124.10
Milan, short sight	99.70	100.10	99.90	100.15	99.65	99.90	99.65	99.90
Vienna, short sight	202	204	202.50	204	201.50	203.50	202.25	203
4½ per cent. Northeastern Railway bonds	100	102	100	101.9	100.2	101.9	100	102
5 per cent. Gotthard Railway bonds	100	105.5	100	105.6	102.3	105.9	102	106
4 per cent. Gotthard Railway bonds	98.5	98.9	98.8	99	98.8	99	99.2	99.4
Stock of Northeastern Railway:								
Original	284	287	281	285	286	288	285	287
Preferred	682	692	685	...	680	690	670	680
Stock of Gotthard Railway	555	560	545	550	547	553	535	540
Stock of Central Railway	459	462	460	465	450	453	450	451
Stock of United Swiss Railway:								
Original	336	338	342	345	349	352	345	349
Preferred	535	538	512	518	518	520	520	524
Stock of West Railway:								
Original	122	125	118	120	117	118	116	118
Preferred	355	365	335	340	330	335	330	345
Stock of Jura-Bern-Luzern Railway	348	355	336	345	338	342	338	341
Stock of Wädensweil-Einsiedeln Railway	133	145	140	148	170	175	173	180
Stock of Arth-Rigi Railway	129	132	126	130	128	130	123	126
Stock of Schweizer. Kreditanstalt	640	642	645	655	640	646	650	657
Stock of Bank in Winterthur	402	404	403	410	411	414	415	425



STOCK EXCHANGE, ZURICH.

Prices of exchange and leading stocks at Zurich, &c.—Continued.

Stocks, &c.	October 1.	November 1.	December 1.	December 31.
London, short sight	25.22 to 25.28	25.22 to 25.25	25.23 to 25.26	25.26 to 25.30
France, short sight	100.05 100.15	100.05 100.15	100.15 100.25	100.10 100.25
Germany, short sight	124.05 124.30	123.95 124.15	124.05 124.20	124.12 124.27
Milan, short sight	99.70 99.90	99.50 99.80	99.70 99.90	99.80 100
Vienna, short sight	200 202	201.25 202.25	200.50 201.50	200.50 201.50
4½ per cent. Northeastern Railway bonds	100 101.7	100 101.5	101.4 ...	101.3 101.5
5 per cent. Gotthard Railway bonds	102.3 106	102 106	102 106	101.7 105.5
4 per cent. Gotthard Railway bonds	99.1 99.3	99.1 98.3	99 99.2	99.5 99.8
Stock of Northeastern Railway:				
Original	280 282	263 265	273 276	279 281
Preferred	670 685	655 662	655 665	672 690
Stock of Gotthard Railway	529 533	536 543	564 570	564 570
Stock of Central Railway	447 450	446 448	444 448	448 ...
Stock of United Swiss Railway:				
Original	340 341	333 335	325 327	321 324
Preferred	524 528	522 525	525 528	525 ...
Stock of West Railway:				
Original	115 116	106 107	106 107	111 112
Preferred	336 ...	325 ...	... 350	335 345
Stock of Jura-Bern-Luzern Railway	330 337	329 335	324 330	335 338
Stock of Wädensweil-Einsiedeln Railway	220 230	229 231	264 267	260 270
Stock of Arth-Rigi Railway	116 118	96 98	95 98	99 103
Stock of Schweizer. Kreditanstalt	650 660	660 665	665 670	695 700
Stock of Bank in Winterthur	413 417	408 413	404 405	395 399

Condition and solvency of banking institutions in Canton Zurich, Switzerland, at the close of the year 1885.

Bank.	Capital stock.	Reserve fund.	Bonds.	Other liabilities.
	Francs.	*Francs.*	*Francs.*	*Francs.*
Bank in Zurich	6,000,000	510,000	1,912,600	10,435,642
Len & Co., Zurich	14,000,000	845,853	17,552,037	11,851,497
Leihkasse der Stadt Zurich	800,000	[1]212,000	1,495,000	6,105,422
Schweizer. Kreditanstalt, Zurich	20,000,000	2,000,000	14,125,474	57,000,542
Leihkasse im Wahlkreise Neuminster	380,000	66,000	1,122,320	1,535,992
Bank in Winterthur	15,000,000	[2]618,330	10,117,400	31,066,520
Handelsbank, Zurich	1,000,000	.....	401,915	670,085
Leihkasse, Wädensweil	1,000,000	[3]225,000	2,131,550	3,665,032
Hypothekarbank, Winterthur	8,000,000	487,000	13,814,400	7,561,671
Leihkasse, Enge	250,000	34,000	127,700	1,394,716
Züricher Kantonalbank (with branches)	12,000,000	2,900,000	60,396,400	63,891,575
Volksbank in Winterthur	[4]414,000	12,234	1,024,260	1,102,744
Leihkasse Winterthur	500,000	105,000	1,556,000	1,373,630

Bank.	Balances.	Profit statement, 1884.	Gross amount of profit and loss account.	Expenses.
	Francs.	*Francs.*	*Francs.*	*Francs.*
Bank in Zurich	18,858,242	2,651	380,061	160,881
Len & Co., Zurich	44,349,387	25,414	867,058	83,750
Leihkasse der Stadt Zurich	8,612,422	1,333	156,765	44,316
Schweizer. Kreditanstalt, Zurich	93,126,016	117,115	2,392,671	504,776
Leihkasse im Wahlkreise Neuminster	3,104,312	4,111	57,191	13,345
Bank in Winterthur	56,802,250	[5]—1,329,380	190,096	252,329
Handelsbank, Zurich	2,072,000	[5]—661,808	47,890	27,898
Leihkasse, Wädensweil	7,021,582	15,691	112,420	27,931
Hypothekarbank, Winterthur	29,863,071	61,139	527,181	51,421
Leihkasse, Enge	1,806,416	4,117	42,586	15,914
Züricher Kantonalbank (with branches)	139,187,975	138,232	1,186,491	427,722
Volksbank in Winterthur	2,553,238	1,026	30,804	18,592
Leihkasse Winterthur	8,534,630	1,500	58,908	20,959

[1] Special reserve, 12,000 francs.
[2] Special reserve.
[3] Special reserve, 35,000 francs.
[4] Association capital, of which 214,299 francs not paid in.
[5] Loss brought forward.

81,
55, 068
355
1, 50
15,
25, 000
4, 000
50, 000

THE UNITED KINGDOM.

Annual report by Consul-General Waller, for the year 1886.

At the opening of this annual report it should, perhaps, be observed that the statistics it contains cover different periods. The English governmental statistics are, in most cases, for the calendar year of 1885, the consular statistics for the year ending September 30, 1886. This difference, though unfortunate, is quite unavoidable. Government statistics are not obtainable for eight or nine months after the time for which they are given. This delay, however, will in the future probably be lessened, for greater effort is being constantly made in this country as in our own to comply with a growing demand for the earliest possible publication of commercial statistics. Indeed, the importance of this kind of information (especially from consular sources) has, during the year, conspicuously engaged the attention of English economists, and been a frequent editorial topic in English newspapers. The frequent allusions in these discussions to the American system of consular reporting have always been of the most appreciative and complimentary character.

TRADE IN 1885–'86.

While the annual report for 1884–'85 showed that this country was then suffering from a general trade depression, greater than had been experienced since the year 1880, this report shows that less business was done in 1885–'86 than in 1884–'85, and was done with less profit. The shrinkage, however, was more in values than quantities. Nearly as much merchandise was exchanged in the one year as the other, but at reduced prices. The imports, though greater in volume, were in valuation about 5 per cent. less than in 1884–'85, while the falling off in the value of exports amounted to 8½ per cent. The slight increase in the volume of imports was largely confined to staple articles of food and the decrease in exports to manufactured products; that is, more foreign food was received and less foreign work done in 1885 than in the year previous. The depression in trade had been so long continued that employers who had hoped by increasing the volume of their business to make up for reduced percentages of profit were now compelled to lessen their productions and decrease the number and the wages of their employés. The natural result of this unfortunate condition became painfully apparent during the year in the augmented distress of the industrial portion of the people. The principal cause of the increased commercial distress of 1885 was undoubtedly the same overproduction from which our own country is now, it is hoped, beginning to recover. But to this was added the discouragement of a harvest, the pecuniary returns from which were even less than those of the year before, the feeling of commercial uncertainty produced by the disturbed state of affairs in the East, and by the occurrence in the autumn of an important general election. It is true that in the political campaign of this year it was often suggested on partisan platforms and in partisan newspapers that the unfortunate condition of English trade was, in a large measure, attributable to the freedom of competition, which other countries (especially Germany and France) enjoyed in the markets of Great Britain, but whatever may have been the motive or the merits of this suggestion (a matter about which I obtrude no opinion) it was

never after the close of the canvass seriously repeated. The hope, which some entertained, that in the report of the royal commission appointed to investigate the trade depression a practical remedy would be suggested, has not been realized.

In reviewing the statistics of trade between the United Kingdom and the United States for 1885–'86, it will be observed that the ratio of exchange was nearly four to one in favor of our country; that is, the United States sent to Great Britain nearly four times as much as they received from her, the aggregate balance of trade being $322,424,960. The following remarkable percentages of all the importations into Great Britain of the necessaries of life were supplied from the United States: Ninety per cent. of its petroleum, 95 per cent. of its beef, 42½ per cent. of its refined sugar, 71 per cent. of its salt pork, 57 per cent. of its wheat, 76 per cent. of its flour, and over 80 per cent. of its cotton.

On the other hand, the statistics show that the United States received the following percentages of the total British exportations of these several articles: About 50 per cent. of its jute manufactures, about 55 per cent. of its native-grown wool, and about 80 per cent. of its tin.

Among the conspicuous increases in British importations from our country in 1885 were refined sugar and petroleum. The history of the trade in these staple productions is especially interesting. In four years the quantity of American petroleum received here has risen from 57,000,000 to 70,000,000 of gallons, and in valuation from $7,360,670 to $10,766,055. The late American improvement in the mode of transporting this article in bulk, in great tanks in ships constructed for the purpose, is one of the reasons for the substantial monopoly our country now sustains in this trade.

The increase in the importations of refined sugar in the last two years has been phenomenal. In 1883 the total import from the United States was 125,596 cwt.; in 1884, 1,044,553 cwt.; and in 1885, 2,228,254 cwt., a difference in valuation in two years of $9,453,070. This increase is undoubtedly due to the system of American drawbacks allowed on exportations of refined sugar—a system against which English refiners make bitter complaint, claiming, as I have shown in a special report on the subject, that American refiners are enabled by this drawback allowance to sell their sugar in this market for less than they can purchase the raw material.

As it appears in the tabulated statement, compiled at this consulate-general, the aggregate value of the exports from the United Kingdom to the United States during the year ending September 30, 1886, was $165,512,318.36, about the same as in 1882, and an increase over 1885 of $32,798,722.47, or nearly 20 per cent.

The only noteworthy specific increases in English exportations were, in wool, 4,000,000 pounds; in yarns, 5,500,000 pounds, and in cement, 185,600 cwt.

The calendar year of 1886 is now so near its close that its commercial record may be safely predicted. It opened with little promise, but so far, from month to month, it has steadily improved, and from present indications will in all probability continue to do so. As the revival of trade in the United States has had much to do with this better tone now apparent in nearly every department of business life here, it is to be hoped for the sake of both countries that the fear sometimes expressed in English financial journals that the United States is in danger of overdiscounting its prosperity will not be realized.

Aggregate imports into the United Kingdom in 1885.

Articles.	Quantities.	Values.
Animals:		
Oxen, bulls, cows, and calves.....number.	373, 078	$35, 282, 385
Sheep and lambs..do..	750, 886	8, 125, 145
Bacon and hams....cwt.	4, 058, 454	43, 428, 340
Beef.....do..	1, 141, 866	13, 990, 250
Bones (except whalebones).....tons.	73, 823	2, 186, 735
Brimstone... .....cwt.	720, 048	916, 565
Bristles .....lbs.	2, 954, 740	2, 088, 220
Butter and butterine.....cwt.	2, 401, 373	57, 317, 540
Candles of all sorts..do..	64, 651	866, 315
Caoutchouc .....do..	180, 141	9, 908, 675
Cheese.....do..	1, 833, 832	20, 346, 760
China, porcelain, &c	146, 830	2, 592, 480
Chemical manufactures and products	.....	6, 781, 455
Clocks.....number.	785, 446	2, 044, 045
Cocoa.....lbs.	23, 414, 892	4, 113, 130
Coffee .....cwt.	1, 034, 562	16, 479, 975
Confectionery succades, cwt.....	362, 434	5, 008, 110
Corn:		
Wheat.....cwt.	61, 498, 864	120, 429, 565
Barley .....do..	15, 366, 160	22, 661, 930
Oats .....do..	13, 057, 189	21, 253, 535
Maize.....do..	31, 526, 735	42, 443, 475
Other kinds.....do..	5, 963, 743	9, 473, 345
Flour of wheat....do..	15, 832, 843	48, 252, 225
Flour, other kinds, do..	766, 929	1, 790, 200
Total.....	144, 012, 463	266, 304, 275
Cotton:		
Raw.....cwt.	12, 730, 503	182, 363, 060
Manufactures	.....	9, 895, 830
Drugs:		
Bark, Peruvian...cwt.	128, 104	4, 371, 660
Opium.....lbs.	710, 099	2, 280, 670
Unenumerated.....	.....	3, 949, 110
Dyeing and tanning stuffs:		
Cochineal, granilla and dust .....cwt	14, 228	426, 900
Cutch and gambier, tons	26, 312	2, 817, 825
Extracts	.....	1, 873, 965
Dyes from coal-tar	.....	2, 437, 295
Indigo .....cwt.	94, 314	10, 599, 200
Madder, madder root, garancine, and munjeet.....cwt.	24, 721	184, 290
Sumac .....tons.	11, 157	814, 755
Valonia.....do..	29, 487	2, 325, 560
Unenumerated	.....	4, 360, 185
Dye-woods .....tons.	95, 540	2, 657, 630
Eggs.....M.	1, 002, 788	14, 656, 185
Feathers, ornamental, lbs.....	751, 261	7, 470, 395
Fish.....cwt.	1, 520, 570	9, 973, 070
Flax and hemp:		
Flax, dressed and undressed.....cwt.	1, 372, 211	14, 278, 990
Tow or codilla of flax and hemp.....cwt.	384, 311	2, 174, 045
Hemp and like substances (except jute) dressed and undressed.....cwt.	1, 451, 731	11, 131, 125
Jute .....do..	5, 713, 475	16, 203, 980
Flowers, artificial,.....	.....	1, 491, 440
Fruits:		
Currants .....cwt.	1, 128, 383	7, 290, 915
Raisins .....do..	591, 234	4, 831, 100
Oranges and lemons, bush	4, 356, 739	7, 405, 050
Raw, exclusive of nuts.....bush.	5, 210, 086	10, 693, 890
Glass of all kinds...cwt.	1, 522, 394	8, 160, 130
Guano .....tons.	25, 258	1, 225, 065
Gum of all sorts....cwt.	400, 198	6, 646, 115
Gutta-percha .....cwt.	53, 839	$1, 735, 665
Hair, goat, or wool...lbs.	14, 371, 140	4, 763, 745
Hides, raw, dry, and wet, cwts	1, 230, 035	19, 351, 640
Hops .....cwt.	266, 952	5, 008, 740
Lace and articles thereof.	.....	5, 161, 555
Lard .....cwt.	871, 210	8, 032, 425
Leather .....lbs.	80, 846, 465	28, 844, 200
Leather gloves.....prs.	16, 434, 456	7, 512, 885
Meat:		
Unenumerated, salted or fresh .....cwt.	600, 644	7, 892, 365
Preserved, other than salted .....cwt.	527, 759	7, 748, 980
Metals:		
Copper:		
Ore and regulus, tons.....	189, 573	14, 417, 990
Unwrought, part wrought and old copper .....tons.	43, 997	10, 165, 790
Iron ore.....do..	2, 822, 598	9, 785, 995
Iron in bars.....do..	122, 597	6, 100, 955
Iron and steel, wrought or manufactured .....cwt.	3, 474, 935	11, 806, 920
Lead, pig and sheet.. .....tons.	108, 012	6, 053, 840
Silver ore	.....	5, 426, 135
Tin, in blocks, ingots, bars, or alaba..cwt.	509, 322	10, 909, 455
Zinc:		
Crude, in cakes..tons.	60, 129	4, 240, 935
Manufactures, cwt	393, 282	1, 804, 415
Musical instruments....	.....	3, 647, 880
Nuts and kernels used for expressing oil therefrom .....tons.	55, 820	3, 658, 960
Oils:		
Fish .....do..	18, 380	2, 602, 060
Palm.....cwt.	905, 439	6, 089, 080
Cocoa-nut..... do..	185, 496	1, 881, 120
Olive .....tons.	24, 227	4, 906, 740
Seed .....do..	12, 940	1, 840, 650
Turpentine .....cwt.	308, 323	1, 939, 635
Oil-seed cake.....tons.	282, 960	10, 152, 165
Onions, raw.....bush.	3, 537, 016	2, 461, 640
Painters' colors and pigments.....	.....	3, 974, 240
Paper for printing or writing .....cwt.	260, 320	1, 950, 995
Paper—other (except hangings) .....cwt.	1, 124, 814	4, 870, 350
Petroleum .....galls.	73, 873, 641	11, 447, 625
Pork .....cwt.	883, 636	3, 448, 655
Potatoes.....do..	2, 299, 934	3, 639, 030
Poultry, game, and rabbits	.....	3, 276, 985
Pyrites of iron or copper .....tons.	654, 521	6, 263, 115
Rags and paper-making materials:		
Rags .....tons.	35, 470	2, 334, 640
Esparto, &c.....do..	299, 100	3, 949, 520
Rice.....cwt.	5, 588, 650	10, 928, 320
Rosin.....do..	1, 322, 354	1, 597, 930
Saltpeter.....do..	324, 737	1, 365, 370
Saltpeter cubic niter, cwt	2, 247, 785	5, 575, 160
Seeds:		
Clover and grass, cwt	315, 698	3, 683, 690
Cotton.....tons.	270, 486	9, 367, 950
Flax or linseed....qrs.	2, 046, 352	21, 922, 330
Rape.....do..	539, 825	4, 385, 895
Silk:		
Knubs, or husks and waste .....cwt	53, 047	3, 375, 955
Raw .....lbs.	2, 081, 600	7, 324, 220
Thrown.....do..	230, 299	1, 159, 410

Aggregate imports into the United Kingdom in 1885—Continued.

Articles.	Quantities.	Values.	Articles.	Quantities.	Values.
Silk manufactures:			**Sugar—Continued.**		
Broad stuffs	.....	$27,982,270	Molasses ..... cwt.	392,875	$695,050
Ribbons	.....	11,335,120	Tallow and stearine. do..	1,008,960	7,900,075
Other	.....	12,026,060	Tea ..... lbs	212,143,820	53,284,950
Total	.....	51,343,450	Teeth, elephant, sea-horse and sea-cow, cwt	9,896	2,482,790
Skins and furs:			**Tobacco:**		
Goat, undressed, number	5,691,659	2,642,985	Manufactured, cigars and snuff ..... lbs.	4,247,257	6,188,725
Seal ..... No.	580,718	2,299,005	Unmanufactured .do..	79,123,339	13,047,675
Sheep and lamb, undressed ..... No.	8,525,662	5,171,715	Watches ..... No.	554,137	3,132,410
Furs of all sorts ..do..	24,831,958	4,559,550	Wine ..... galls.	14,629,738	25,631,960
Spices:			**Wood and timber:**		
Cinnamon ..... lbs.	1,597,504	293,630	Hewn ..... loads.	1,935,854	23,184,985
Pepper ..... do..	31,588,870	4,338,905	Sawn or split ..... do..	4,235,508	47,990,005
Of all other sorts..do..	20,216,999	2,228,155	Staves ..... do..	124,849	2,696,175
Spirits:			Mahogany ..... tons.	56,053	2,438,755
Rum ..... proof galls.	6,877,581	2,732,100	**Wool—sheep, lamb, alpaca, and the llama tribe** ..... lbs.	505,687,590	105,888,440
Brandy ..... do..	2,783,056	6,212,120	Woolen rags ..... tons.	32,642	3,409,975
Other ..... do..	2,094,881	1,725,305	**Woolen and worsted yarn:**		
Total	11,755,518	10,669,525	Berlin wool and yarn used for fancy purposes ..... lbs	1,255,425	1,107,060
Sugar:			Yarn for weaving .do..	14,632,653	8,871,995
Refined and sugar candy ..... cwt.	5,329,046	24,178,710	Yeast, dried ..... cwt.	293,238	4,087,520
Unrefined ..... do..	19,416,559	67,433,300			

Principal articles of import into the United Kingdom in 1885 *compared with* 1884.

Articles.	Increase.	Decrease.	Articles.	Increase.	Decrease.
Animals:			Eggs ..... M.	9,179	.....
Oxen, bulls, cows, and calves ..... number.	.....	52,429	Feathers, ornamental .. lbs	.....	117,845
Sheep and lambs ..... do..	.....	194,156	Fish ..... cwt	184,148	.....
Bacon and hams ..... cwt.	640,023	.....	**Flax and hemp:**		
Beef ..... do..	51,127	.....	Flax, dressed and undressed ..... cwt.	32,400	.....
Bones (except whalebone) ..... tons	.....	8,468	Tow or cordilla of flax and hemp ..... cwt	30,326	.....
Brimstone ..... cwt.	.....	27,350	Hemp and like substances, dressed and undressed (except jute) ..... cwt.	104,478	.....
Bristles ..... lbs.	28,248	.....	Jute ..... do.	632,117	.....
Butter and butterine ... cwt.	.....	74,063	**Fruits:**		
Candles, of all sorts.... do..	.....	26,328	Currants ..... do..	.....	74,461
Caoutchouc ..... do..	.....	18,703	Raisins ..... do .	79,364	.....
Cheese ..... do..	.....	93,307	Oranges and lemons, bush	.....	587,796
China, porcelain, &c ... do..	3,274	.....	Raw, exclusive of nuts, bush	148,326	.....
Clocks ..... number.	88,216	.....	Glass, of all kinds ..... cwt.	77,871	.....
Cocoa ..... cwt.	701,018	.....	Guano ..... tons.	.....	23,089
Coffee ..... do..	.....	103,093	Gum, of all sorts ..... cwt.	69,580	.....
Confectionery ..... do..	34,848	.....	Gutta percha ..... do..	.....	8,874
Corn:			Hair, goat's hair or wool, lbs	.....	2,534,886
Wheat ..... do..	14,192,708	.....	Hides, raw, dry, and wet, cwts	12,288	.....
Barley ..... do..	2,413,145	.....	Hops ..... do..	10,175	.....
Oats ..... do..	135,323	.....	Lard ..... do..	171,383	.....
Maize ..... do..	6,746,271	.....	Leather ..... lbs.	3,970,494	.....
Other kinds ..... do..	218,765	.....	Leather gloves ..... prs.	.....	1,512,732
Flour of wheat ..... do..	737,542	.....	**Meat:**		
Flour of other kinds .do..	.....	31,347	Unenumerated, salted or fresh ..... cwt.	78,978	.....
Cotton, raw ..... do..	.....	2,887,079	Preserved, other than salted ..... cwt.	76,769	.....
Drugs:			**Metals:**		
Bark, peruvian ..... do..	22,313	.....	Copper:		
Opium ..... lbs.	219,424	.....	Ore and regulus ... tons	2,894	.....
Dyeing or tanning stuffs:			Unwrought, part wrought, and old copper ..... tons.	1,762	.....
Cochineal ..... cwt.	.....	538			
Cutch and gambier .. tons.	.....	5,907			
Indigo ..... cwt.	.....	10,109			
Madder, madder-root, garancine, and munjeet cwt	1,513	.....			
Sumach ..... tons	.....	547			
Valonia ..... do..	.....	4,960			
Unenumerated ..... cwt.	242,881	.....			
Dye-woods ..... tons.	3,985	.....			

Principal articles of import into the United Kingdom in 1885, *&c.*—Continued.

Articles.	Increase.	Decrease.
Metals—Continued.		
Iron ore ..... tons.	91,709	.....
Iron bars ..... do..	7,111	.....
Iron and steel, wrought or manufactured ..... cwt.	.....	227,505
Lead, pig and sheet, tons	.....	1,004
Tin, in blocks, ingots, bars, and slabs .... cwt.	.....	12,169
Zinc:		
Crude ..... tons.	12,471	.....
Manufactures ..... do..	.....	13,511
Nuts and kernels used for expressing oil therefrom ..... tons.	.....	13,511
Oil:		
Fish ..... tuns.	891	.....
Palm ..... cwt.	64,427	.....
Cocoanut ..... do..	.....	58,903
Olive ..... tuns.	7,014	.....
Seed ..... do..	412	.....
Turpentine ..... cwt.	.....	154,316
Oil-seed cake ..... tons.	13,120	.....
Onions, raw ..... bush.	500,210	.....
Paper:		
For printing or writing, cwt	52,410	.....
Other (except hangings), cwt	.....	114,111
Petroleum ..... gals.	20,897,852	.....
Pork ..... cwt.	46,111	.....
Potatoes ..... do...	.....	144,226
Pyrites of iron or copper, tons	91,448	.....
Rags and paper-making materials:		
Rags ..... tons.	.....	763
Esparto and other materials ..... tons.	38,556	.....
Rice ..... cwt.	.....	990,808
Rosin ..... do..	.....	153,601
Saltpeter ..... do..	.....	8,901
Saltpeter cubic niter ... do..	216,887	.....
Seeds:		
Clover and grass ..... cwt.	25,439	.....
Cotton ..... tons.	57,558	.....
Flax or linseed ..... qrs.	250,469	.....
Rape ..... do..	215,570	.....
Silk:		
Knubs or husks and waste ..... cwt.	.....	14,192
Raw ..... lbs.	.....	2,441,102
Thrown ..... do..	.....	93,648
Skins and furs:		
Goat, undressed .number.	1,121,334	.....
Seal ..... do..	.....	132,914
Sheep and lamb, undressed ..... number.	524,350	
Furs of all sorts .number.	.....	1,784,306
Spices:		
Cinnamon ..... lbs.	.....	370,240
Pepper ..... do..	3,712,109	.....
Of all other sorts ..... do..	.....	1,419,527
Spirits:		
Rum ..... gals.	.....	498,891
Brandy ..... do..	404,080	.....
Other ..... do..	.....	21,835
Sugar:		
Refined sugar candy, cwt	1,065,173	.....
Unrefined ..... cwt.	.....	206,120
Molasses ..... do..	.....	19,219
Tallow and stearine ... cwt.	.....	105,928
Tea ..... lbs.	.....	1,733,989
Teeth, elephant's, sea-cow, and sea-horse ..... cwt.	.....	204
Tobacco:		
Unmanufactured ..... lbs.	1,081,921	.....
Manufactured, and cigars, pounds	25,582,992	.....
Watches ..... number.	37,321	.....
Wine ..... gals.	.....	476,533
Wood and timber:		
Hewn ..... loads.	.....	18,076
Sawn or split ..... do..	186,044	
Staves ..... do..	.....	10,099
Mahogany ..... tons.	.....	6,783
Wool, sheep, lamb, alpaca, and the llama tribe, pounds	.....	20,889,071
Woolen rags ..... tons	1,620	.....
Woolen and worsted yarn:		
Berlin wool and yarn used for fancy purposes .. lbs.	169,805	.....
Yarn for weaving .... do..	1,290,968	.....
Yeast, dried ..... cwt	10,722	.....

Exports from the United Kingdom to the United States in 1885 *compared with* 1884.

PRODUCE AND MANUFACTURES OF THE UNITED KINGDOM.

Articles.	Value.	Increase over 1884.	Decrease from 1884.
Alkali	$5,131,805	$69,135	
Animals	375,225		$175,880
Apparel, &c	1,367,685		532,300
Arms and ammunition	616,870		225,485
Beer and ale	709,820		111,140
Bleaching materials	1,424,145		277,030
Books	1,316,640		35,170
Cement	629,450	86,355	
Chemicals and dye-stuffs	1,978,090	204,410	
Coal and fuel	764,925		110,060
Cottons, all kinds	11,355,595		2,097,680
Earthen and china ware	3,403,085		38,260
Glass manufactures	824,210		225,480
Hardware and cutlery	1,461,805		149,465
Jute:			
Yarn	488,395		56,075
Manufactures	4,209,640		1,333,045
Leather	966,800	51,985	
Linens	11,421,160		89,935
Machinery	1,452,430		295,725
Metal, wrought and unwrought	21,987,925		2,879,590
Painters' materials	483,780		66,385
Paper, all sorts	342,180	17,185	
Pickles, vinegar, &c	890,910		23,005
Rags, for paper	2,024,845		732,125
Salt	1,152,930	25,740	
Silk manufactures	2,937,915		448,685
Skins and furs	2,829,400		400,870
Stationery (not paper)	374,980	12,120	
Telegraphic apparatus	65,585		1,170,055
Wool, raw and manufactured	15,970,535		2,604,380
All other articles	11,010,895	986,265	
Total	109,969,105		12,164,075

FOREIGN AND COLONIAL PRODUCE.

Caoutchouc	$1,106,670		$498,880
Chemicals	518,685	$88,185	
Coffee	169,950		178,125
Cotton, raw	546,060		546,935
Drugs	2,097,530	546,435	
Dyeing or tanning stuffs	1,685,565	110,075	
Feathers	807,875		1,415,935
Flax	353,620	42,090	
Fruits	1,123,490		59,130
Gums	986,390	82,480	
Hair	913,805	466,315	
Hemp	1,258,480	581,820	
Hides, raw	1,660,190	306,425	
Leather	1,003,840	568,570	
Metals	5,685,285	283,795	
Precious stones	662,040		568,425
Rags and materials for paper making	1,483,455	156,350	
Rice	528,100		199,680
Seeds	298,995		279,420
Skins and furs	2,546,590	660,655	
Spices	1,637,145	446,335	
Sugar, unrefined	433,455		825,185
Tea	1,159,340		268,740
Wool	9,232,970	8,525,180	
All other articles	7,609,815	406,000	
Total	45,503,840	8,944,355	

Imports into the United Kingdom from the United States in 1885 *compared with* 1884.

Articles.	Values.	Increase over 1884.	Decrease from 1884.
Animals, live	$15, 725, 250	.....	$1, 308, 800
Bacon and hams	32, 391, 810	$2, 002, 200	.....
Beef, salt and fresh	13, 306, 500	240, 885	.....
Butter and butterine	1, 587, 635	.....	155, 145
Caoutchouc	132, 125	.....	149, 685
Cheese	9, 325, 820	.....	3, 072, 720
Clocks	487, 135	.....	46, 885
Coffee	473, 545	91, 540	.....
Copper	4, 992, 530	207, 380	.....
Corn, flour and meal, all sorts	113, 927, 930	15, 344, 740	.....
Cotton, raw and manufactured	134, 226, 410	.....	21, 210, 510
Fish	2, 547, 080	.....	192, 080
Fruit	2, 212, 650	446, 930	.....
Hides, raw	428, 330	.....	32, 235
Hops	2, 110, 015	.....	1, 527, 255
Iron and steel manufactures	862, 135	.....	128, 425
Lard	7, 248, 830	336, 185	.....
Leather	7, 500, 080	306, 620	.....
Manures and phosphates	1, 671, 780	175, 990	.....
Meat, salt, fresh, and preserved	3, 472, 700	.....	111, 185
Mutton, fresh	460, 775	.....	3, 235
Oils	3, 151, 815	.....	725, 020
Oil-seed cake	7, 212, 200	235, 220	.....
Petroleum	10, 766, 055	2, 662, 220	.....
Pork, salt	1, 668, 475	129, 890	.....
Rosin	1, 503, 825	.....	364, 115
Seeds, clover and grass	324, 360	.....	603, 395
Silver ore	1, 211, 350	345, 330	.....
Skins and furs	2, 699, 905	563, 195	.....
Sugar, refined	10, 354, 920	5, 083, 995	.....
Sugar, unrefined	169, 485	77, 955	.....
Sugar, molasses	502, 625	.....	180, 815
Tallow and stearine	1, 972, 945	.....	1, 193, 495
Tobacco	12, 668, 830	5, 861, 675	.....
Wood and timber	8, 113, 790	.....	1, 562, 760
Wool	120, 610	15, 045	.....
All other articles	14, 821, 420	.....	.....
Total	434, 394, 065	21, 001, 360	.....

Trade between the United States and Great Britain and Ireland for ten years.

Year.	Exports to the United States.			Imports from the United States.
	Produce and manufactures of Great Britain and Ireland.	Foreign and colonial produce and manufactures.	Total.	
1876	$84, 167, 585	$16, 965, 550	$101, 133, 135	$379, 495, 040
1877	81, 884, 070	17, 545, 395	99, 429, 465	389, 129, 365
1878	72, 760, 380	14, 899, 140	87, 659, 520	445, 730, 350
1879	101, 609, 950	25, 983, 995	127, 593, 945	459, 091, 475
1880	154, 279, 355	35, 491, 605	189, 770, 690	535, 406, 300
1881	148, 981, 490	34, 933, 745	183, 915, 235	516, 039, 145
1882	154, 850, 735	38, 692, 480	193, 543, 215	441, 763, 065
1883	136, 864, 840	46, 797, 690	183, 662, 530	496, 194, 800
1884	122, 133, 180	41, 559, 485	163, 692, 665	431, 392, 705
1885	109, 969, 105	45, 503, 840	155, 472, 945	432, 394, 065

Value of exports from the United Kingdom of Great Britain and Ireland to the United States of America for the year ending September 30, 1886, together with value for preceding year also column exhibiting decrease or increase for period named.

No.	District.	Staple (if any).	1886.	1885.	Percentage of decrease.	Decrease.	Percentage of increase.	Increase.
1	Belfast	Linens	$8,391,983 19	$7,800,096 65	.....	.....	7½	$591,886 54
2	Birmingham	Hardware, cutlery, &c	3,218,881 93	2,875,388 26	.....	.....	11½	343,493 67
3	Bradford	Stuffs	18,310,924 26	11,565,989 95	.....	.....	58¼	6,753,934 31
4	Bristol	Tin-plates and chemicals	463,995 00	399,655 00	.....	.....	16	64,340 00
5	Cardiff	Tin and terne plates	2,378,530 83	3,785,602 65	37	$1,407,062 82	.....	.....
6	Cork	Hides and feathers	256,836 22	65,254 28	.....	.....	293½	191,581 94
7	Dublin	Ale and porter	1,032,404 87	781,782 04	.....	.....	32	250,622 83
8	Dundee	Burlaps and linens	6,858,574 36	6,335,495 71	.....	.....	8	523,078 65
9	Dunfermline	Linens and cottons	1,659,097 14	1,508,730 89	.....	.....	8½	60,337 25
10	Falmouth	China-clay	59,043 13	98,655 54	40	39,612 41	.....	.....
11	Glasgow	Thread, cottons, and linens	6,549,455 96	5,285,319 35	.....	.....	23¾	1,264,136 61
12	Gloucester	Tin-plates and woolens	140,753 74	154,930 79	9	14,177 05	.....	.....
13	Hull	Beer colors, &c	249,066 87	433,112 51	42½	184,045 64	.....	.....
14	Leeds	Woolens and cottons	5,179,506 35	3,884,045 99	.....	.....	33½	1,295,460 36
15	Leith	Books	843,961 62	895,903 50	5¾	51,941 88	.....	.....
16	Liverpool	Tin-plates, chemicals, &c	33,532,938 68	26,677,507 59	.....	.....	25¾	6,855,431 09
17	London	Metals, &c	51,632,928 19	37,823,547 79	.....	.....	38¾	14,309,375 40
18	Londonderry	Whisky	4,235 91	1,401 35	.....	.....	202¾	2,834 56
19	Manchester	Cottons	11,281,578 09	10,583,050 34	.....	.....	6¾	698,527 75
20	Newcastle-on-Tyne	Chemicals, sodas, &c	1,940,896 69	1,786,211 85	.....	.....	8½	154,684 84
21	Nottingham	Lace goods, &c	5,781,355 84	5,288,572 34	.....	.....	8¾	442,783 50
22	Plymouth	Live stock	97,866 35	90,727 70	.....	.....	7¾	7,138 65
23	Sheffield	Hardware and cutlery	2,546,092 71	2,186,745 21	.....	.....	16¾	359,347 50
24	Southampton	Live stock	6,437 48	5,974 05	.....	.....	7¾	463 43
25	Tunstall	Earthenware	3,136,018 95	2,809,865 56	.....	.....	11¾	326,153 39
	Total		165,512,318 36	132,713,595 89	.....	1,696,839 80	20	34,495,562 27

SUMMARY.

Total for year ending September 30, 1886	$165,512,318 36	Increase in 20 consulates	$34,495,562 27
Total for year ending September 30, 1885	132,713,595 89	Decrease in 5 consulates	1,696,839 80
Increase	32,798,722 47	Net increase	32,798,722 47

Value of declared exports from the various consular districts of the United Kingdom of Great Britain and Ireland to the United States of America, from October 1, 1876, to September 30, 1886, compiled at the consulate-general, London.

[Year ending September 30.]

Years.	Belfast.	Birmingham.	Bradford.	Bristol.	Cardiff.
1877	$6,640,559 13	$2,842,871 05	$7,311,101 75	$218,222 00	$102,271 70
1878	6,243,226 62	2,309,513 42	5,693,799 37	166,648 20	296,903 74
1879	7,328,156 19	2,435,271 89	5,955,287 85	164,552 24	607,331 57
1880	9,415,832 81	4,920,433 58	10,731,646 49	157,177 01	1,824,812 07
1881	7,856,100 68	4,876,611 92	7,091,394 18	137,978 33	2,148,560 56
1882	9,412,627 07	5,178,118 16	8,385,638 20	166,304 00	2,368,766 84
1883	8,136,805 43	4,719,827 19	9,463,444 93	174,567 33	1,672,831 14
1884	6,842,100 78	3,977,812 16	13,601,042 51	202,126 51	4,378,767 29
1885	7,800,096 65	2,875,388 26	11,565,989 95	399,655 00	3,785,602 65
1886	8,391,033 19	3,218,881 93	18,819,924 26	463,995 00	2,378,539 83
	78,067,438 50	36,854,729 56	98,119,269 49	2,251,225 62	19,559,387 39

Year.	Cork.	Dublin.	Dundee.	Dunfermline.	Falmouth.
1877	$40,845 71	$550,311 80	$4,825,588 12	(*)	$53,451 77
1878	53,203 07	583,162 66	4,641,560 47	$1,099,002 88	55,036 64
1879	83,016 01	702,218 46	5,112,470 82	1,443,045 32	67,252 47
1880	303,024 93	1,029,415 77	8,224,285 20	2,160,227 76	132,499 40
1881	179,255 02	1,172,754 17	7,881,189 83	1,889,286 45	76,517 79
1882	124,517 28	976,981 35	7,892,926 82	2,404,535 63	108,013 53
1883	86,395 52	903,478 07	7,917,358 37	2,139,489 62	53,684 43
1884	71,631 23	937,414 91	7,666,359 66	1,846,596 28	104,732 18
1885	65,254 28	781,782 04	6,335,495 71	1,508,759 89	98,655 54
1886	256,836 22	1,032,404 87	6,852,574 36	1,659,097 14	59,043 13
	1,268,979 27	8,669,924 10	66,855,809 36	16,240,040 97	808,857 88

Year.	Glasgow.	Gloucester.	Hull.	Leeds.	Leith.
1877	$4,589,156 85	(†)	(‡)	$1,704,827 58	$1,671,257 79
1878	4,249,000 00	(†)	(‡)	1,411,870 59	611,810 09
1879	5,298,345 00	(†)	$131,683 09	1,556,965 96	368,939 12
1880	9,219,927 88	$195,880 38	547,247 23	3,615,388 09	548,321 12
1881	9,723,231 70	256,572 62	272,358 48	2,839,801 07	587,578 90
1882	10,219,715 60	143,991 74	384,164 81	4,776,336 87	735,988 67
1883	9,662,722 89	198,171 52	371,324 57	4,508,784 53	906,710 92
1884	7,381,874 93	212,375 36	459,468 67	5,377,198 16	993,368 76
1885	5,285,319 35	154,930 79	433,112 51	3,884,045 99	895,903 50
1886	6,549,455 96	140,753 74	249,066 87	5,179,506 35	843,961 62
	72,178,750 16	1,302,676 15	2,848,421 23	34,853,620 19	8,163,790 49

Year.	Liverpool.	London.	Londonderry.	Manchester.	Newcastle-on-Tyne.
1877	$22,585,056 66	$22,728,887 88	$782 16	$9,876,768 09	$640,836 16 §107,803 09
1878	19,084,235 15	19,416,581 34	1,797 66	8,176,886 53	792,289 86
1879	23,062,247 11	24,420,872 05	2,133 92	8,814,443 92	1,018,306 44
1880	42,589,566 16	62,681,120 18	2,610 03	15,236,381 28	2,328,551 69
1881	29,119,805 55	50,549,973 44	1,552 93	12,148,327 29	2,635,311 35
1882	34,781,520 69	54,240,152 97	160,918 81	14,383,407 28	2,994,655 69
1883	32,594,517 92	48,015,188 59	2,816 81	14,564,425 85	2,459,258 23
1884	28,728,569 10	46,003,504 86	2,016 97	13,479,474 91	2,202,483 25
1885	26,677,507 59	37,823,547 79	1,401 35	10,583,050 34	1,786,211 85
1886	33,532,938 68	51,632,923 19	4,235 91	11,281,578 09	1,940,896 69
	292,755,964 61	417,012,702 24	189,266 55	118,544,743 58	18,907,659 30

* Hitherto an agency of the Leith consulate.
† Hitherto an agency of the Bristol consulate.
‡ Hitherto an agency of the Leeds consulate.
§ These figures represent the amount of exports from the Newcastle agencies not embodied in the Consular Report of 1877.

Value of declared exports from the various consular districts of the United Kingdom of Great Britain and Ireland to the United States of America, &c.—Continued.

[Year ending September 30.]

Year.	Nottingham.	Plymouth.	Sheffield.	Southampton.	Tunstall.
1877	(*)	$21,071 69	$5,720,331 20		$2,428,483 17
1878	$3,062,216 71	21,473 92	2,140,443 49	†$44,536 28	2,604,681 77
1879	4,421,233 42	10,611 84	2,723,943 18	64,189 22	2,687,476 73
1880	7,137,796 16	38,154 94	5,189,692 84	34,532 49	3,703,844 73
1881	8,467,304 18	59,130 95	5,955,769 89	43,988 87	3,815,760 65
1882	9,774,548 65	89,117 46	6,217,748 54	90,365 87	3,419,833 88
1883	8,381,569 29	152,014 43	3,947,766 91	99,396 68	4,075,490 89
1884	6,536,813 48	245,087 15	3,069,771 88	148,558 88	2,850,551 83
1885	5,288,572 84	90,727 70	2,186,745 21	5,974 05	2,809,865 56
1886	5,731,355 84	97,866 35	2,546,092 71	6,437 48	3,136,018 95
	58,801,410 67	825,255 93	39,698,305 85	537,929 77	31,532,008 16

* Hitherto an agency of the Sheffield consulate.

† This amount represents the exports for the September quarter of 1878. Southampton having only at the commencement of that quarter been erected into a consulate, the four quarters of the year 1877 and the first three quarters of 1878 were embodied in the returns of the consulate-general at London, of which Southampton was during that period an agency.

SUMMARY.

Gross total for the year ending September 30, 1877	$94,552,132 21 *107,863 09	$94,659,995 30
1878		82,760,380 46
1879		98,479,994 32
1880		191,973,290 22
1881		158,786,061 80
1882		179,489,846 41
1883		165,207,987 61
1884		157,314,696 65
1885		132,713,595 89
1886		165,512,318 36
Gross total for the ten years ending September 30, 1886		1,426,848,167 02

* These figures represent the amount of exports from the Newcastle agencies not embodied in the Consular Report of 1877.

Recapitulation for the ten years ending September 30, 1886.

Consulates.	Amount.	Consulates.	Amount.
London	$417,012,702 24	Dunfermline*	$16,240,040 97
Liverpool	292,755,964 61	Dublin	8,669,924 10
Manchester	118,544,743 58	Leith	8,163,790 49
Bradford	98,119,269 49	Hull†	2,848,421 23
Belfast	78,067,438 50	Bristol	2,251,225 62
Glasgow	72,178,750 16	Gloucester‡	1,302,676 15
Dundee	66,855,809 36	Cork	1,268,979 27
Nottingham*	58,801,410 67	Plymouth	825,255 93
Sheffield	39,698,305 85	Falmouth	808,857 88
Birmingham	36,854,729 56	Southampton	537,929 77
Leeds	34,853,020 19	Londonderry	189,266 55
Tunstall	31,532,008 16		
Cardiff	19,559,387 39	Total	1,426,848,167 02
Newcastle	18,907,659 30		

* These figures represent only the declared value of exports for the nine years ending September 30, 1886, those for the previous years being embodied in the reports from Sheffield and Leith, of which consulates Nottingham and Dunfermline had been agencies.

† These figures represent only the declared value of exports for the eight years ending September 30, 1886, those for the previous years being embodied in the reports from Leeds, of which consulate Hull has been an agency.

‡ These figures represent only the declared value of exports for the seven years ending September 30, 1886, those for the previous years being embodied in the reports from Bristol, of which consulate Gloucester had been an agency.

Recapitulation for the year ending September 30, 1886.

Consulates.	Amount.	Consulates.	Amount.
London	$51, 632, 923 19	Dunfermline	1, 659, 097 14
Liverpool	33, 532, 938 68	Dublin	1, 032, 404 87
Bradford	18, 319, 924 26	Leith	843, 961 62
Manchester	11, 281, 578 09	Bristol	463, 995 00
Belfast	8, 391, 983 10	Cork	256, 836 22
Dundee	6, 858, 574 36	Hull	249, 066 87
Glasgow	6, 549, 455 96	Gloucester	140, 753 74
Nottingham	5, 731, 355 84	Plymouth	97, 866 35
Leeds	5, 179, 506 35	Falmouth	59, 043 13
Birmingham	3, 218, 881 93	Southampton	6, 437 48
Tunstall	3, 136, 018 95	Londonderry	4, 235 91
Sheffield	2, 546, 092 71		
Cardiff	2, 378, 539 83	Total	165, 512, 318 36
Newcastle	1, 940, 896 69		

Value of declared exports from the various consular districts of the United States of America in the United Kingdom of Great Britain and Ireland for the four quarters of the year ending September 30, 1885.

City.	Quarters ending—				Total for the year.
	Dec. 31, 1884.	Mar. 31, 1885.	June 30, 1885.	Sept. 30, 1885.	
Belfast	$1, 719, 705 73	$2, 309, 654 71	$1, 539, 410 05	$2, 240, 326 16	$7, 900, 096 65
Birmingham	713, 908 51	627, 063 60	660, 581 19	873, 834 96	2, 875, 388 26
Bradford	2, 562, 859 32	2, 376, 021 34	2, 817, 004 74	3, 810, 104 55	11, 565, 989 95
Bristol	48, 139 00	84, 808 00	124, 269 00	142, 439 00	399, 655 00
Cardiff	1, 214, 225 59	846, 428 92	771, 184 25	953, 814 49	3, 785, 602 65
Cork	21, 681 10	12, 664 75	9, 324 96	21, 583 47	65, 254 28
Dublin	194, 059 91	132, 652 78	196, 606 61	258, 462 44	781, 782 04
Dundee	1, 784, 380 79	1, 570, 416 29	1, 485, 445 01	1, 545, 258 62	6, 385, 495 71
Dunfermline	337, 124 29	447, 789 11	267, 772 44	546, 074 05	1, 598, 759 89
Falmouth	18, 261 58	39, 163 38	15, 998 71	25, 231 87	98, 655 54
Glasgow	1, 514, 801 61	1, 331, 897 79	1, 046, 310 88	1, 392, 309 07	5, 285, 319 35
Gloucester	39, 073 34	44, 522 36	26, 461 23	44, 873 86	154, 930 79
Hull	109, 642 79	121, 051 10	126, 219 99	76, 198 63	453, 112 51
Leeds	873, 578 70	929, 380 53	846, 536 83	1, 234, 549 98	3, 885, 045 99
Leith	221, 704 38	209, 310 89	176, 594 90	288, 293 33	895, 903 50
Liverpool	6, 663, 424 07	6, 653, 770 62	6, 306, 475 76	7, 053, 837 14	26, 607, 507 59
London	8, 082, 851 20	9, 047, 644 66	8, 747, 533 16	11, 445, 518 77	37, 323, 547 79
Londonderry	405 15	229 83	221 78	544 59	1, 401 85
Manchester	2, 316, 881 53	2, 841, 851 45	2, 430, 238 15	2, 994, 079 21	10, 583, 050 34
Newcastle	435, 266 66	451, 397 50	487, 700 13	411, 847 56	1, 786, 211 85
Nottingham	1, 108, 875 76	1, 589, 472 33	953, 385 49	1, 636, 838 76	5, 288, 572 34
Plymouth	37, 146 13	24, 870 77	11, 959 47	16, 751 33	90, 727 70
Sheffield	623, 887 77	477, 725 04	503, 495 38	581, 637 02	2, 186, 745 21
Southampton	1, 542 54	295 76	1, 362 76	2, 272 90	5, 974 05
Tunstall	610, 048 70	620, 538 05	728, 638 35	850, 640 46	2, 809, 865 56
Total	31, 253, 476 15	32, 781, 620 96	30, 231, 181 52	38, 447, 317 26	132, 713, 595 89

Value of the declared exports at the various consular districts of the United States in the United Kingdom for the four quarters of the year ending September 30, 1886, and compared with the corresponding quarter of the previous year (see foregoing tabular statement).

City.	Quarters ending—				Total for the year.
	Dec. 31, 1885.	Mar. 31, 1886.	June 30, 1886.	Sept. 30, 1886.	
Belfast	$2,055,668 83	$2,331,411 82	$1,547,447 20	$2,457,403 84	$8,391,933 19
Birmingham	762,091 62	745,445 91	778,912 80	932,431 60	3,218,881 93
Bradford	4,544,413 74	4,770,700 56	4,189,412 64	4,815,397 32	18,319,924 26
Bristol	217,939 00	73,369 00	81,621 00	91,621 00	463,995 00
Cardiff	858,608 12	190,790 06	728,897 24	600,244 41	2,378,539 83
Cork	57,632 61	52,011 37	37,757 85	109,434 39	256,836 22
Dublin	268,347 22	264,253 80	253,354 00	246,449 85	1,032,404 87
Dundee	1,657,454 07	1,742,010 32	1,589,582 59	1,869,527 38	6,858,574 36
Dunfermline	400,817 74	451,220 72	290,830 47	516,228 21	1,659,097 14
Falmouth	25,553 18	14,558 55	9,021 98	9,309 42	59,043 13
Glasgow	1,839,711 06	1,526,311 30	1,310,819 31	1,872,614 29	6,549,455 96
Gloucester	39,486 70	42,861 12	31,243 44	27,162 48	140,753 74
Hull	72,687 65	63,531 15	62,902 59	49,945 48	249,066 87
Leeds	1,079,963 84	1,263,727 22	1,218,782 08	1,617,033 21	5,179,506 35
Leith	203,523 44	219,912 07	190,814 27	229,711 84	843,961 62
Liverpool	8,517,940 85	8,753,048 90	9,005,612 80	7,256,336 13	33,532,938 68
London	11,884,845 23	12,634,094 38	12,328,773 76	14,785,209 82	51,632,923 19
Londonderry	461 54	3,023 86	649 29	101 22	4,235 91
Manchester	2,080,386 70	3,324,990 89	2,520,595 70	3,355,604 71	11,281,578 09
Newcastle	337,613 98	624,924 02	532,247 29	446,111 42	1,940,896 69
Nottingham	1,301,196 68	1,742,190 78	1,056,061 93	1,631,906 45	5,731,355 84
Plymouth	12,664 47	20,396 00	26,272 77	38,533 11	97,866 35
Sheffield	614,616 83	593,573 93	629,938 79	707,963 16	2,540,092 71
Southampton	1,281 94	2,660 74	1,778 69	716 11	6,437 48
Tunstall	649,140 64	780,500 93	833,961 80	872,415 58	3,136,018 95
Total	39,484,047 75	42,231,458 90	39,257,397 28	44,539,414 43	165,512,318 36

December 31, 1885	$39,484,047 75	September 30, 1886	44,539,414 43
December 31, 1884	31,253,476 15	September 30, 1885	38,447,317 26
Increase	8,230,571 60	Increase	6,092,097 17
March 31, 1886	42,231,458 90	Increase December quarter, $8,230,571 60, or nearly 21 per cent.	
March 31, 1885	32,781,620 96	Increase March quarter, $9,449,837 94, or more than 22 per cent.	
Increase	9,449,837 94	Increase June quarter, $9,026,215 76, or nearly 23 per cent.	
June 30, 1886	39,257,397 28	Increase September quarter, $6,092,097 17, or nearly 13½ per cent.	
June 30, 1885	30,231,181 52	Total increase for year ending September 30, 1886, $32,798,722 47, or nearly 20 per cent.	
Increase	9,026,215 76		

Value of declared exports from the consular district of London, England, to the United States during the four quarters of the year ending September 30, 1886.

Articles.	Quarters ending—				Total.
	Dec. 31, 1885.	Mar. 31, 1886.	June 30, 1886.	Sept. 30, 1886.	
Beer, wine, and spirits	$184,947 38	$186,403 49	$185,506 09	$99,740 14	$656,597 10
Books and stationery	347,895 34	312,098 87	355,856 10	316,310 62	1,332,160 93
Chemicals, soda, &c	1,079,233 33	396,444 01	242,638 14	128,066 39	1,846,381 87
Clothing	28,498 00	60,872 32	37,351 77	55,767 17	182,489 26
Diamonds	506,570 00	863,828 79	822,065 28	1,348,117 12	3,540,581 19
Dry goods, silks, woolens, cottons, laces, &c	791,304 97	1,335,220 90	478,638 50	1,283,577 82	3,888,742 19
Feathers	136,800 63	136,841 44	234,271 97	231,772 98	739,687 02
Hops	13,057 84	2,956 99	1,241 06	123,562 71	140,818 60
Iron, steel, metals, &c	2,216,469 45	3,206,967 49	4,324,092 42	2,813,390 91	12,560,920 27
Leather, hides, skins, furs, &c	1,278,965 74	1,213,870 98	1,257,813 19	718,720 78	4,469,370 69
Machinery and hardware	10,759 67	19,448 70	16,692 75	25,693 43	72,594 55
Rags and paper waste	131,455 10	109,704 98	100,739 57	84,476 30	426,375 95
Raw silk	54,229 03	49,361 56	3,177 06	.....	106,767 65
Seeds	62,049 37	54,686 48	25,637 98	25,233 89	167,607 22
Tea	319,578 42	192,151 12	311,515 90	134,729 82	957,975 26
Wool	757,820 14	879,033 71	141,153 84	981,765 91	2,739,773 60
Miscellaneous	3,965,210 82	3,614,202 55	3,790,382 14	6,434,284 33	17,804,079 84
Total	11,884,845 23	12,634,094 38	12,328,773 76	14,785,209 82	51,632,923 19
Total for preceding year	8,082,851 20	9,047,644 66	8,747,533 16	11,445,518 77	37,323,547 79
Increase	3,801,994 03	3,586,449 72	3,581,240 60	3,339,691 05	14,309,375 40

Value of declared exports from this consulate-general to the United States for the years 1885 and 1886, also increase or decrease of value in the articles named.

Articles.	1885.	1886.	Increase.	Decrease.	Per cent. of increase.	Per cent. of decrease.
Beer, wines, and spirits	$429,070 15	$656,597 10	$227,526 95		53 +	
Books and stationery	1,474,894 53	1,332,160 93		$142,733 60		9½+
Chemicals, soda, and drugs	1,700,885 79	1,846,381 87	145,496 08		8½+	
Clothing	207,766 67	182,489 26		25,277 41		12 +
Diamonds	2,356,838 85	3,540,581 19	1,183,742 34		50 +	
Dry goods	4,010,919 29	3,888,742 19		122,177 10		3 +
Feathers	766,324 32	739,687 02		26,637 30		3½+
Hops	13,790 52	140,818 60	127,028 08		921 +	
Iron, steel, &c	8,136,580 61	12,560,920 27	4,424,339 66		54½+	
Leather, hides, skins, furs, &c	4,105,496 36	4,469,370 69	363,874 33		8¾+	
Machinery and hardware	56,082 00	72,594 55	16,512 55		29½+	
Rags and paper waste	1,147,284 23	426,375 95		721,508 28		62¾+
Raw silk	53,968 59	106,767 65	52,799 06		97 +	
Seeds	212,458 03	167,607 22		44,850 81		21 +
Tea	880,325 10	957,975 26	77,650 16		8¾+	
Wool	1,279,818 70	2,739,773 60	1,459,954 90		114½+	
Miscellaneous	10,490,444 05	17,804,079 84	7,313,635 79		67½+	
Total	37,323,547 79	51,632,923 19	15,392,559 90	1,083,184 50	*38½+	

*Net total increase.

SUMMARY.

Total for year ending September 30, 1886	$51,632,923 19	Increase in 11 articles	$15,392,559 90
Total for year ending September 30, 1885	37,323,547 79	Decrease in 6 articles	1,083,184 50
Net total increase	14,309,375 40	Net total increase	14,309,375 40

POPULATION.

Since the last census was taken, in 1881, statistics of population have been carefully estimated by official experts to the middle of each year. The increase, 376,299 in 1885–'86, is only 13,049 greater than that of 1884–'85. In both years it appears that population was added to every division of the Kingdom, Ireland excepted.

The proportion of emigration from Great Britain to the United States in 1885 was larger than usual. Sixty-six per cent. of all who left this country seeking homes elsewhere went to and settled in the United States.

Total population of the United Kingdom estimated to the middle of each year (exclusive of army, navy, and merchant seamen).

Divisions.	1885.	1886.
England and Wales	27,499,041	27,870,586
Scotland	3,907,736	3,949,393
Ireland	4,924,342	4,887,439
Total	36,331,119	36,707,418

Total number of births, deaths, and marriages in the United Kingdom.

Items.	1884.	1885.
Births	1,154,666	1,135,768
Deaths	693,110	687,953
Marriages	252,947	244,031

Number of emigrants, of British origin only, to countries out of Europe.

Destination.	1884.	1885.
Australia and New Zealand	44,255	39,395
British North America	31,124	19,838
United States of America	155,280	137,687
Other places	11,510	10,724
Total	242,179	207,644
Of foreign and unknown origin	61,722	56,741
Total emigration	303,901	264,385

Number of immigrants of British and foreign nationality that entered the United Kingdom from countries out of Europe.

Years.	British and Irish.	Foreigners.	Not distinguished.	Total.
1884	91,356	32,007	103	123,466
1885	85,468	27,006	1,075	113,549

The number of paupers (exclusive of vagrants) in receipt of relief in the United Kingdom on a certain day in 1885.

Census taken.	Adult able-bodied.			All other paupers.			Total.		
	In-door.	Out-door.	Total.	In-door.	Out-door.	Total.	In-door.	Out-door.	Total.
England and Wales, January 1, 1885	23,909	78,518	102,427	166,275	515,453	681,728	190,184	593,971	784,155
Scotland, May 14, 1885	.....	.....	58,415	.....	.....	32,676	.....	.....	91,091
Ireland, end of first week in January, 1885	7,416	.....	7,416	42,262	.....	42,262	49,678	57,039	106,717
Total for United Kingdom	31,325	78,518	168,258	208,537	515,453	756,666	239,862	651,010	981,963

Amount expended in relief of poor in the United Kingdom in 1885.

England and Wales	$36,179,315
Scotland	4,357,550
Ireland	6,295,055
Total	46,831,920

Criminal returns, 1885.

Divisions.	Committed for trial.			Convicted.	Acquitted.	Trials postponed through disagreement of juries.
	Males.	Females.	Total.			
England and Wales	11,318	2,268	13,586	10,500	3,029	.....
Scotland	2,083	454	2,537	1,956	528	.....
Ireland	2,349	501	2,850	1,573	1,191	.....
Total	15,750	3,223	18,973	14,029	4,748	75

The favorable signs in the criminal returns of the Kingdom since 1882 are marked and significant. In that year there were 15,898 convictions; in 1885, 14,029—a reduction, not considering increase of population, approximating to 12 per cent. This encouraging change was not accidental. The cause, it is thought, may be largely ascribed to the reduced consumption during that period of spirituous and intoxicating liquors, a fact shown by the following table:

Wines, spirits, and beer consumed in the United Kingdom.

Year.	Wines.	Foreign spirits.	Domestic spirits.	Beer.
	Gallons.	*Gallons.*	*Gallons.*	*Barrels.*
1882	14,481,282	8,292,125	29,251,754	27,023,616
1883	14,382,983	8,235,738	29,421,590	26,828,040
1884	14,075,625	8,085,705	28,745,823	27,586,526
1885	13,848,748	7,935,085	27,348,805	27,101,288

EDUCATION.

The quasi public schools of the Kingdom were attended by 115,140 more children in 1885 than in 1884, and the parliamentary grants for education were $1,493,775 greater. The per capita tax, to which allusion was made in the report of last year, is still imposed upon the scholars. The people of our country can scarcely appreciate the self-denial that is practiced by impoverished parents here in order to meet this weekly assessment. The feeling against this taxation has, however, become so universal that it will in all probability soon be abolished.

Primary schools in the United Kingdom in 1885.

Divisions.	Number schools inspected.	Number children who can be accommodated.	Average number children in attendance.	Number children present at inspection.
England and Wales	18,895	4,998,718	3,371,325	3,992,074
Scotland	3,081	660,101	455,655	521,417
Ireland	7,936	1,075,004	502,454	.....

Amount expended from parliamentary grants in 1885, $22,165,715.

Average strength of the British army and navy.

Year.	Regular army.			Navy.		
	At home.	Abroad.	Total.	Officers and men.	Marines.	Total.
1884	89,994	93,010	183,004	44,550	12,400	56,950
1885	91,579	106,485	198,064	48,600	12,900	61,500

Effective strength of the army reserve, militia, and yeomanry, and number of volunteers enrolled.

Class.	1884.	1885.
Army reserve	43,185	47,024
Militia and militia reserve	113,787	119,356
Yeomanry	11,488	11,590
Volunteers	215,015	224,012
Total	383,475	401,982

AGRICULTURE.

It is a matter of controversy among agricultural economists whether the year 1885–'86 was not, everything considered, the most unfortunate one for farmers since 1879. About the only ameliorating circumstances were the root crop, which was extraordinary in quality and quantity, the great rise which took place in the price of wool, and the improved healthy condition of the flocks and herds.

There were under cultivation in the aggregate, 36,469 acres more than in 1885, but there was a decrease of 195,198 acres in the area under wheat, a fact undoubtedly attributable to the fall in the price of wheat in 1885.

The extension of permanent pasture land still continues. In 1886 the increase was 192,800 acres, making the total area 15,535,200 acres, indicating the steady change occurring against cereal cultivation, and in favor of grazing.

The area under barley was also less than in the year previous. The marked increase in the acreage under oats was because the oat crop has been found more reliable and more remunerative than either barley or wheat.

About the same number of acres were devoted to hops as in 1885, and, as appears elsewhere, the importation of hops was greater than 1884 or 1885.

There was an increase in the number of cattle and horses, but a decrease in the number of sheep, lambs, and pigs. Prices were generally worse than in 1885, notably so in the cereals. The price of meat and store cattle ruled lower than in 1884–'85, but sheep substantially improved in value.

Agriculture.

Crops.	1886.	1885.	1886 compared with 1885.	
			Increase.	Decrease.
	Acres.	*Acres.*	*Acres.*	*Acres.*
Corn crops	9, 878, 787	10, 014, 625	.....	135, 838
Green crops	4, 726, 452	4, 765, 195	.....	38, 743
Clover under rotation and permanent pasture	32, 555, 660	32, 354, 277	201, 383	.....
Flax	130, 933	110, 639	20, 294	.....
Hops	70, 127	71, 327	.....	1, 200
Bare fallow	570, 280	579, 707	.....	9, 427
Total	47, 932, 239	47, 895, 770	36, 469	.....

Acreage under corn crops.

Description.	1886.	1885.	Increase.	Decrease.
	Acres.	*Acres.*	*Acres.*	*Acres.*
Wheat	2, 357, 894	2, 553, 092	.....	195, 198
Barley	2, 432, 749	2, 447, 169	.....	14, 420
Oats	4, 418, 959	4, 282, 594	136, 365	.....
Rye	66, 599	59, 301	7, 298	.....
Beans	387, 346	441, 267	.....	53, 921
Peas	215, 240	231, 202	.....	15, 962
Total	9, 878, 787	10, 014, 625	.....	135, 838

Live stock.

Animals.	1886.	1885.	1886 compared with 1885.	
			Increase.	Decrease.
	Numbers.	*Numbers.*	*Numbers.*	*Numbers.*
Horses	1, 927, 527	1, 909, 200	18, 327	.....
Cattle	10, 872, 811	10, 868, 760	4, 051	.....
Sheep	28, 955, 240	30, 086, 200	.....	1, 130, 960
Pigs	3, 497, 165	3, 686, 628	.....	189, 463
Total	45, 252, 743	46, 550, 788	.....	1, 298, 045

MINERAL PRODUCTION OF THE UNITED KINGDOM.

The annual statement of the mineral production of the Kingdom for 1885, together with the estimates of values, obtained from the Economist, are given herewith, in comparison with the corresponding figures for 1884:

Minerals raised.

Articles.	Quantity.		Value at the mine.	
	1885.	1884.	1885.	1884.
	Statute tons.	*Statute tons.*		
Alum clay (bauxite)	9, 030	8, 560	$18, 285	$21, 400
Alum shale	2, 331	1, 960	1, 460	1, 225
Antimony ore	.....	4	.....	200
Arsenic	8, 129	7, 903	284, 285	289, 205
Arsenical pyrites	1, 911	1, 762	7, 865	5, 715
Barytes	26, 153	20, 062	151, 480	146, 780
bog iron ore	8, 066	6, 453	12, 100	9, 675
Clays (except ordinary clay)	2, 531, 198	2, 695, 710	3, 004, 670	3, 336, 980
Coal	159, 351, 418	160, 757, 779	205, 697, 040	232, 230, 915
Cobalt and nickel ore	109	66	2, 110	1, 185
Copper ore	36, 241	41, 728	398, 815	547, 135
Copper precipitate	138	421	5, 745	15, 930
Fluor-spar	423	581	2, 455	3, 650
Gold ore	35	.....	35	.....
Gypsum	112, 078	109, 922	238, 765	227, 205
Iron ore	15, 417, 982	16, 187, 887	19, 848, 595	22, 316, 375
Iron pyrites	29, 860	29, 104	92, 585	90, 695
Jet (incomplete)	.....	.....	.....	.....
Lead ore	51, 302	54, 485	2, 038, 000	2, 007, 775
Manganese ore	1, 688	909	12, 055	7, 195
Ocher, umber, &c	13, 328	9, 191	117, 295	94, 880
Oil shale	1, 770, 413	1, 518, 871	2, 236, 510	1, 933, 900
Phosphate of lime	80, 000	51, 866	250, 000	519, 880
Salt	2, 207, 683	2, 332, 704	3, 903, 075	3, 391, 715
Silver from lead ore	.....	.....	.....	.....
Slates and slabs	468, 954	485, 664	5, 878, 860	5, 870, 100
Stone, &c	Unknown.		44, 245, 510	44, 254, 270
Strontia	9, 800	11, 422	24, 500	114, 220
Tin ore	14, 376	15, 117	3, 311, 950	3, 340, 270
Wolfram	374	64	23, 995	5, 520
Zinc ore	24, 668	25, 563	335, 000	370, 145
Total	.....	.....	292, 143, 040	321, 160, 140

Metals contained in the ores.

Articles.	Quantity.		Value at the average market prices.	
	1885.	1884.	1885.	1884.
Copper.....tons..	2,746	3,295	$677,075	$1,012,955
Copper precipitate	27	55		
Gold.....ounces..	3½	.....	70	.....
Iron.....tons..	5,353,524	5,626,644	62,457,780	68,223,060
Lead .....tons..	37,687	40,075	2,167,000	2,264,235
Silver from lead ore.....ounces..	320,520	325,718	824,690	843,955
Tin.....tons..	9,331	9,574	4,169,015	4,048,700
Zinc.....tons..	9,778	9,919	730,500	764,175
Total	.....	.....	70,526,130	76,657,080

Fisheries in Scotland.

Items.	1884.	1885.
Number of vessels engaged	15,445	15,532
Number of persons engaged on vessels.....	49,860	51,097
Total number employed including fish curers and others on shore.....	102,563	101,037
Value of cured fish:		
Herrings.....	$10,606,735	$7,864,761
Cod, ling and hake.....	747,040	626,763
Cod, ling and hake in pickle	44,305	53,350
Value of fresh fish	3,581,475	4,135,085
Value of shell-fish	404,695	445,965
Value of salmon.....	1,875,000	1,619,255
Total value	16,759,250	14,745,179

Fisheries in Ireland.

Items.	1884.	1885.
Number of vessels engaged	5,667	5,785
Number of persons employed	21,491	21,825
Value of mackerel caught	$678,190	$980,900
Value of herring caught	891,855	555,620
Value of fish exported to England:		
Salmon.....	.....	$2,120,535
Herring.....	.....	395,020
Mackerel	.....	442,550
Cod.....	.....	258,310
Total	.....	3,216,415

Salmon sold at London Fish Market.

[Each box weighing about 1 cwt.]

Where from.	1884.	1885.	Increase in 1885.
	Boxes.	*Boxes.*	*Boxes.*
England and Wales	3,392	4,352	960
Scotland.....	27,219	30,362	3,143
Ireland.....	5,979	8,375	2,396
Holland, Sweden, and Norway	2,710	3,285	575
Total.....	39,300	46,374	7,074

SHIPPING.

The fact is significant that the first time in ten years the tonnage of sailing vessels built in Great Britain for the home trade exceeded the tonnage of steam vessels. The excess was 11,436 tons, while the tonnage of sailing vessels built for foreigners was about double the tonnage of those using steam. Notwithstanding the increased economy in the use of steam it appears from the tendency indicated in the returns of ship-building that it is being found more profitable to invest in sailing vessels that do not require constant employment to insure reasonable dividends. It appears from the following table, taken from a recent authoritative statement on this subject, that at present the proportion of sail and steam shipping of the world is nearly two to one in favor of the former.

Country.	Total tonnage.	Steam vessels.	Sailing vessels.	Percentage of steam tonnage on total.
	Tons.	*Tons.*	*Tons.*	
British colonies	1,936,407	323,387	1,613,020	16
United Kingdom	7,387,208	3,969,728	3,417,480	54
France	1,033,829	511,072	522,757	50
Holland	302,769	103,422	194,347	36
Germany	1,294,288	413,943	880,345	33
Italy	971,001	122,297	848,704	13
Norway	1,583,434	105,628	1,477,806	7
Sweden	529,585	106,831	422,754	20
Belgium	80,592	74,667	5,925	92
Russia	560,000	110,000	450,000	20
Austria-Hungary	281,346	79,396	201,950	24
United States	1,287,999	184,184	1,103,811	14
Other countries	750,000	150,000	600,000	20
Total	17,998,458	6,259,569	11,738,899	35

The records of arrivals and departures at British ports of vessels of all nations, in 1885, is about the same as that of the year previous. The tonnage increase in favor of the United States, though small, deserves to be noticed. The aggregate tonnage was 31,862,420; of this Great Britain represented 70 and the United States 8 per cent. It will be observed from an accompanying table that for the last two years the shipping tonnage of the port of London has continued to increase, while that of Liverpool has continued to decrease.

In this connection attention is called to the following interesting statement recently issued by the National Life-Boat Institution of England:

During the past thirty-two years the self-righting life-boats of the National Life-Boat Institution have been launched nearly five thousand times on service, and have saved upwards of twelve thousand lives. The boats have been capsized, altogether, forty-one times, but only on eighteen of these occasions was there any loss of life. The number of lives lost (counting the twenty-seven men who perished on the occasion of the recent sad disasters to the Southport and St. Anne's life-boats) amounts to only eighty-eight, including twelve shipwrecked persons. The seventy-six life-boat men lost represents about one in eight hundred and fifty of the men employed in the boats on service, and the capsizes were at the rate of one in each of the one hundred and twenty service launches. The life-boats have also been out on exercise, within the same period of thirty-two years, upwards of fifteen thousand times, with the loss of only eight lives. In 1885 the Institution reported five hundred and fifty-five lives saved.

Tonnage of steam vessels of each nationality entered and cleared, with cargoes and in ballast, at ports in the United Kingdom from and to foreign countries and British possessions.

Flag.	Entered.				Cleared.			
	1884.	1885.	Increase.	Decrease.	1884.	1885.	Increase.	Decrease.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Austrian	29,709	23,154	.....	6,555	34,829	20,029	.....	14,800
Belgian	255,267	282,378	27,111	.....	264,673	274,364	9,691	.....
British	19,811,038	19,747,938	.....	63,100	20,217,634	20,046,224	.....	171,410
Danish	498,165	448,607	.....	49,558	522,547	464,461	.....	58,086
Dutch	591,974	643,978	52,004	.....	584,710	645,190	60,489	.....
French	742,717	740,416	.....	2,301	759,897	738,579	.....	21,318
German	1,222,827	1,348,611	125,784	.....	1,216,609	1,357,509	140,900	.....
Greek	68,926	77,349	8,423	.....	77,232	78,021	789	.....
Italian	96,148	54,105	.....	42,043	107,084	47,875	.....	59,209
Norwegian	287,017	290,087	3,070	.....	288,041	285,307	.....	2,734
Portuguese	17,941	22,588	4,647	.....	18,640	20,147	1,507	.....
Russian	40,136	52,487	12,351	.....	47,276	46,487	.....	789
Spanish	435,160	434,080	.....	1,080	455,260	451,962	.....	3,298
Swedish	338,758	366,294	27,536	.....	358,687	386,299	27,612	.....
United States	56,438	23,626	.....	32,812	56,673	21,602	.....	35,071
Other countries	26,629	31,168	4,539	.....	49,596	38,945	.....	10,651
Total	24,518,850	24,586,866	68,016	.....	25,059,388	24,923,001	.....	136,387

Tonnage of sailing and steam vessels of each nationality entered and cleared, with cargoes and in ballast, at ports in the United Kingdom from and to foreign countries and British possessions.

Nationality.	Entered.				Cleared.			
	1884.	1885.	Increase.	Decrease.	1884.	1885.	Increase.	Decrease.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Austrian	104,682	90,618	.....	14,064	113,111	97,527	.....	15,584
Belgian	255,652	283,465	27,813	.....	265,043	277,511	12,468	.....
British	23,037,215	22,980,464	.....	56,751	23,634,486	23,408,591	.....	225,895
Danish	769,676	721,590	.....	48,086	824,953	765,720	.....	59,233
Dutch	674,138	739,024	64,886	.....	659,081	740,692	81,611	.....
French	968,528	938,594	.....	29,934	1,003,871	939,132	.....	64,739
German	1,826,892	1,995,687	168,795	.....	1,857,157	2,001,735	154,578	.....
Greek	86,917	82,044	.....	4,875	92,616	85,946	.....	6,690
Italian	414,746	363,580	.....	51,166	429,851	360,169	.....	69,682
Norwegian	1,922,228	1,958,586	36,358	.....	1,995,024	1,976,162	.....	18,862
Portuguese	18,989	24,544	5,555	.....	21,233	22,027	794	.....
Russian	241,435	244,594	3,159	.....	250,477	240,211	.....	10,266
Spanish	464,571	454,383	.....	10,188	480,806	475,432	.....	5,734
Swedish	650,134	696,535	46,491	.....	684,401	711,815	27,414	.....
United States	222,968	255,615	32,627	.....	214,659	264,738	50,079	.....
Other countries	29,730	33,097	3,367	.....	57,212	41,814	.....	15,398
Total	31,688,521	31,862,420	173,899	.....	32,584,001	32,419,222	.....	164,779

Sailing and steam vessels built in the United Kingdom (exclusive of vessels built for foreigners and of vessels built for Her Majesty's navy).

Years.	Sailing vessels.		Steam vessels.		Total.	
	No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
1882	362	145,700	610	521,575	972	667,275
1883	368	140,818	806	621,758	1,174	762,576
1884	431	162,234	570	335,208	1,001	497,442
1885	459	208,411	393	196,975	852	405,386

Tonnage of British and foreign vessels (sailing and steam) that entered with cargoes and in ballast at the principal ports in the United Kingdom from foreign countries and British possessions.

Ports.	1884.	1885.	Increase.	Decrease.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Cardiff	2, 667, 422	2, 381, 606	.....	285, 816
Glasgow	879, 071	922, 927	43, 856	.....
Hull	1, 591, 251	1, 651, 648	60, 397	.....
London	6, 769, 787	6, 902, 655	132, 888	.....
Liverpool	5, 209, 357	5, 173, 330	.....	36, 027
Newcastle	2, 095, 039	1, 858, 795	.....	236, 244
Southampton	900, 458	911, 172	10, 714	.....
Sunderland	812, 905	786, 019	.....	26, 886
Other ports	10, 763, 251	11, 274, 268	511, 017	.....
Total	31, 688, 521	31, 862, 420	.....	173, 899

BRITISH RAILWAYS.

The returns of railways in the United Kingdom for the year 1885–'86 show that the year's traffic was a trifle heavier, but less profitable to shareholders, than that of the previous year. The system was extended 305 miles and the paid-up capital advanced to $4,075,000,000—an increase of nearly $29,000,000. The increase of mileage and vested capital during the past thirty years is shown in the following table:

Year.	Mileage.	Capital paid up.	Capital per mile open.	Increase per mile over previous year.	Year.	Mileage.	Capital paid up.	Capital per mile open.	Increase per mile over previous year.
1854...	8, 053	$1, 430, 343, 970	$177, 615	.....	1882...	18, 457	$3, 839, 497, 850	$208, 045	.....
1864...	12, 789	2, 128, 598, 065	166, 440	.....	1883...	18, 681	3, 924, 606, 560	210, 085	$2, 070
1874...	16, 449	3, 049, 479, 655	185, 390	.....	1884...	18, 864	4, 007, 321, 835	212, 330	1, 845
1879...	17, 696	3, 585, 017, 345	202, 590	.....	1885...	19, 169	4, 079, 290, 275	212, 805	375

The total mileage is divided among the three parts of the Kingdom, as follows: England and Wales, 13,612 miles; Scotland, 2,982; Ireland, 2,575; the proportions of the total being 71.01 per cent. for England and Wales, 15.55 per cent. for Scotland, and 13.43 per cent. for Ireland.

The net receipts of the English and Welsh lines were $139,230,280; Scotch lines, $18,355,610, and Irish, $6,253,195.

Below is given a comparison of the receipts from various sources of the railway system of the whole Kingdom, showing a considerable decrease in receipts from passengers and goods, and only a small increase in the miscellaneous traffic. The effect of these losses, however, is somewhat counteracted by a reduction in the working expenses of $2,146,200.

Receipts.	1885.	1884.	+Increase or −decrease in 1885.	
			Amount.	Per cent.
Passenger traffic	$148, 865, 110	$150, 152, 250	−$1, 287, 140	−.85
Goods traffic	184, 359, 725	188, 352, 960	− 3, 993, 235	−2.12
Miscellaneous traffic	14, 554, 035	14, 108, 005	+ 446, 030	+3.17
Total	347, 778, 870	352, 613, 215	− 4, 834, 345	−1.37
Working expenditure	183, 939, 785	186, 085, 985	− 2, 146, 200	−1.15
Net revenue	163, 839, 085	166, 527, 230	− 2, 688, 145	−1.61
Percentage of net earnings to capital	4.02	4.16	.....	.....

The companies, it appears, carried 2,221,200 more passengers in 1885 than in the year previous, but their aggregate receipts from this source diminished by $2,145,500—this loss being divided among the classes as follows: Decrease on first-class receipts, $1,190,150; second class, $869,445; and third class, $86,350.

Class.	Passengers carried (excluding season-ticket holders).		Receipts.	
	1885.	1884.	1885.	1884.
	No.	*No.*		
First	32,465,142	34,582,500	$16,214,850	$17,405,000
Second	60,985,772	62,265,200	14,655,355	15,525,000
Third	603,762,117	598,144,100	87,943,850	88,030,000
Total	697,213,031	694,991,800	118,814,055	120,960,000

Receipts and tonnage of goods traffic.

From—	Receipts.			Tonnage.		
	1885.	1884.	+ increase or − decrease in 1885.	1885.	1884.	+ increase or − decrease in 1885.
			Per cent.	*Tons.*	*Tons.*	*Per cent.*
General merchandise	$101,910,820	$104,400,000	−2.38	73,511,709	75,712,300	−2.90
Minerals	76,231,150	77,643,500	−1.81	183,776,745	183,615,600	+.08
Live stock	6,214,065	6,189,000	+.40			

The details of expenditure compared with the preceding year are shown in the subjoined table:

Working expenditure.

Subject of expenditure.	1885.	1884.	Increase + decrease − 1885.
Maintenance of way	$31,529,115	$33,112,500	−$1,583,385
Locomotive power	46,887,680	47,329,000	− 441,320
Rolling stock	17,481,215	16,997,000	+ 434,215
Traffic expenses	56,535,810	56,395,500	+ 140,310
General charges	8,165,705	8,183,000	− 17,295
Rates and taxes	9,999,395	9,688,500	+ 310,895
Government duty	1,717,280	1,993,000	− 275,720
Compensation for personal injuries	640,050	918,500	− 278,450
Compensation for damage and loss	906,525	1,012,000	− 105,475
Legal and parliamentary expenses	1,237,025	1,620,000	− 382,975
Steamboat, &c.	6,802,120		
Miscellaneous	2,149,385	2,309,000	− 159,615

Length, paid-up capital, traffic, receipts, and working expenses of horse railroads in Great Britain in 1885.

Divisions.	Length.	Paid-up capital.	Passengers carried.	Gross receipts.	Working expenses.	Net receipts.
	Miles.		*No.*			
England and Wales	656	$48,410,590	283,320,756	$10,471,380	$3,006,350	$2,465,030
Ireland	85	5,248,000	19,943,445	890,360	660,760	229,600
Scotland	70	5,429,350	61,438,106	1,705,450	1,210,875	494,575
Total	811	59,087,940	364,702,307	13,067,190	9,877,895	3,189,295
Total for 1884	752	55,040,605	330,794,405	12,103,775	9,260,195	2,843,580

BRITISH POST-OFFICE.

The British post-office is a marvel of business centralization. In addition to the forwarding of mail-matter, transmission of telegrams, the use of the telephone, the delivery of small parcels, the exchange of money by postal orders, and receipt of small savings—features to which allusion was made in the last annual report—it receives money for investment in Government stock, insures lives, grants annuities, issues inland-revenue stamps and licenses, and recruits soldiers for the army.

MONEY ORDERS.

Money orders are issued for sums varying from 1*s.* (25 cents) to £10 ($50), at rates varying from 2*d.* (4 cents) to 1*s.* (25 cents). This is regarded as a safe mode of transmitting money. The original order being issued to the applicant, and a duplicate being sent to the post-office to which it is made payable, the recipient having, upon application for the amount, not only to sign it, in exact accordance with the printed directions, but has also to state the full name and address of the sender, which information does not, of course, appear upon the original order in his hands, but upon the duplicate sent to the postmaster at the office at which it is payable. The total number issued for the year 1885 was 10,703,320, representing $111,319,495.

NOTE SYSTEM.

Postal notes are issued for sums varying from 1*s.* (25 cents) to £1 ($5), at rates from ½*d.* (1 cent) to 1½*d.* (3 cents). If an odd amount of pence is required to be transmitted, the sender may affix postage-stamps of the required value on the back of the postal note. The special advantage of these orders or notes is that they can be cashed at any post-office at which they are presented (unless the name of a particular office is designated), and it is only necessary for them to be signed in the name of the person appearing upon them. The fact that they are so cashed, or passed as current "coin," renders this a rather insecure way of transmitting money. The total number issued during the year 1885 was 24,085,015, representing $50,483,850.

SAVINGS BANK.

The savings bank is the largest and most popular branch of the department. In this the public may invest their savings at interest in sums of from 1*s.* (25 cents) to £150 ($750), but not more than £30 ($150) may be deposited in any one year. The total deposits, including interest accrued, in the post-office savings bank on the 31st December, 1885, amounted to $238,489,190. In order to encourage thrift among the poor, blanks are supplied gratuitously at all post-offices, divided into twelve small spaces, on which unused 1*d.* (2-cent) postage-stamps may be affixed, one by one, until filled up, when the slip will be received at any post-office as a deposit for 1*s.* (25 cents).

A person who has thus deposited his savings can, when the usual deposit book has been supplied to him, make fresh deposits or withdraw his money at a day's notice from any one of the 8,000 offices in the United Kingdom.

INVESTMENTS IN GOVERNMENT STOCKS.

A person wishing to invest any sum, from £10 ($50) to £100 ($500), in Government stock can do so at any post-office, at the current price of the day, at a small commission, varying from 9*d.* (18 cents) to 2*s.* 3*d.* (56 cents).

LIFE INSURANCES.

The post-office also issues life policies upon the lives of persons between the ages of fourteen and sixty-five, and for sums of from £5 ($25) to £100 ($500). The premiums may be paid annually, half yearly, quarterly, monthly, or weekly, and at any post-office near which the insured may be located when the premiums become due.

ANNUITIES.

In like manner the post-office also grants immediate or deferred annuities of from £5 ($25) to £100 ($500) per annum, under similar conditions, payable either in one sum or by periodical installments. Persons whose lives are insured, or to whom annuities are granted by the department, have direct Government security for the payment of the money. Husband and wife may each be insured, or purchase annuities for the maximum amount £100 ($500).

STAMPS AND LICENSES.

Bill stamps, indicature fee stamps, and dog, carriage, game, and all other licenses, are also insured at most of the head and district post-offices in London and the provinces.

TELEGRAPH, TELEPHONE, AND PRIVATE WIRE SYSTEMS.

The lowest rate for inland telegrams is 6*d.* (12 cents). The total number of messages transmitted for the year ending March 31, 1886, was 39,235,813.

The department has a large number of telephone exchanges, the subscriptions to which amount, at present, to about $125,000 per annum, but the greater part of the telephone business is conducted by private companies, who pay royalties to the department of upwards of $100,000 per annum. The department also leases private telegraph wires to individuals at yearly rentals.

ARMY RECRUITING.

The department assists the military authorities, by supplying postmasters with all the necessary forms of attestation of recruits, which obviates the necessity for intending recruits having to proceed to the nearest military depot for information.

Every postmaster is required to furnish a detailed cash account every day to the chief office, showing the whole of the business transacted and the amount of balance in hand due to the department at the close of the day.

There are employed in the various departments of the chief office in London alone no less than 7,548 officials, of whom 1,710 are females.

The subjoined table shows the estimated number of letters, &c., delivered in the United Kingdom during the year 1885:

Mail matter.	Number estimated.	Increase.	Average number to each person.
		Per ct.	
Letters	1,403,597,900	3.2	38.6
Post-cards	171,290,000	6.9	4.7
Book packets and circulars	342,207,400	6.8	9.4
Newspapers	147,671,100	2.8	4.1
Total	2,064,766,400	4.0	56.8
Parcels	26,417,422	15.3	.7
Gross total	2,091,183,822	4.2	57.5

Of the above total number of pieces of mail matter delivered, 84 per cent. were delivered in England and Wales (27.4 per cent being in London alone), 9.6 per cent. in Scotland, and 6.4 per cent. in Ireland.

POSTAL REVENUE.

The gross revenue from every source for the year was $51,394,325, arrived at as stated herewith:

Postage on letters, parcels, post-cards, newspapers, &c	$39,434,490
Money orders	827,840
Postal orders	572,690
Unclaimed money orders	18,000
Savings bank	1,605,050
Telegrams	8,936,255
	51,394,325
Expenses	37,849,915
Net revenue	13,544,410

Being an increase of $312,920 on the previous year.

BRITISH PATENT OFFICE.

More applications for British patents come from the United States than from any other foreign country. The number was 201 greater last year than the year before, and was 8½ per cent. of the whole number registered. Under the act of 1883 the arrangements and facilities of the patent office have been greatly improved. The expense to applicants has been reduced and the modes of procedure simplified. The following table shows the cost of securing the rights of a patentee for the periods named:

Period.	Cost.	Period.	Cost.
For 9 months	$5	For 9 years	$295
For 4 years	20	For 10 years	370
For 5 years	70	For 11 years	470
For 6 years	120	For 12 years	570
For 7 years	170	For 13 years	670
For 8 years	220	For 14 years	770

More than 40 per cent. of the patents granted are abandoned during the first year.

Applications for patents in 1885.

From residents of—	Number.	From residents of—	Number.
England and Wales	11,254	Holland	29
United States	1,382	India	26
Scotland	905	New Zealand	25
Germany	869	Denmark	24
France	701	Spain	23
Ireland	208	Victoria	22
Austria	156	New South Wales	15
Belgium	121	Channel Islands	12
Canada	79	Cape of Good Hope	10
Switzerland	56	Other countries	66
Sweden	41		
Russia	41	Total	16,101
Italy	36		

ELECTION EXPENSES.

It will be remembered that in 1883 the opponents of the proposed law to prevent bribery and to reduce expenses at general elections urged, with apparently good reasons, that while the principle of the law would command approval it would be found, if enacted, impossible to execute it; that the multiplicity of its cumbersome details would render it useless. So general was this feeling that the law contained the singular condition that it should not be operative for more than one year unless re-enacted, but experience has justified the wisdom of its general provisions. The expense of elections has been greatly lessened, and the number of contested elections, always exciting and oftentimes scandalous, greatly reduced.

The first official statement of the expenses of a general election since the passage of this law has just been issued, and is given in the following table:

Cost of general election.

Divisions.	Total expenses.	Cost per vote.	Divisions.	Total expenses.	Cost per vote.
England:			Scotland:		
Counties	$2,593,640	$1 33	Counties	$426,530	$1 66
Boroughs	1,335,815	81	Boroughs	210,690	1 08
Universities	965	.....	Total Scotland	637,220	1 41
Total England	3,930,420	83	Ireland:		
Wales:			Counties	261,375	68
Counties	199,860	1 50	Boroughs	56,650	66
Boroughs	47,000	1 14	Universities	685	.....
Total Wales	246,860	1 39	Total Ireland	318,710	68
			Grand total United Kingdom	5,133,210	1 10

Total amount received from and paid to depositors in the post-office savings banks, and of the computed capital of those savings banks, in 1885.

Items.	England and Wales.	Scotland.	Ireland.	United Kingdom.
Received	$74,074,575	$1,830,795	$4,728,665	$80,634,035
Paid	60,855,135	1,499,035	3,659,540	66,013,710
Capital	221,440,375	4,848,955	12,190,860	238,489,190

Total amount received and paid by trustees of savings banks from and to depositors, and of the computed capital of savings banks, in 1885.

Items.	England and Wales.	Scotland.	Ireland.	United Kingdom.
Received	$35, 399, 075	$11, 602, 465	$2, 036, 995	$49, 028, 535
Interest credited	4, 795, 675	1, 023, 960	263, 385	6, 083, 020
Paid	38, 442, 060	11, 299, 620	2, 794, 765	52, 536, 445
Capital	181, 813, 450	39, 874, 160	10, 091, 935	231, 779, 545

Amounts cleared the London Bankers' Clearing House in the last five years.

Years.	Amount.
1881	$31, 785, 000, 000
1882	31, 105, 000, 000
1883	29, 645, 000, 000
1884	28, 995, 000, 000
1885	27, 555, 000, 000

Public revenues and expenditures of Great Britain for the year ending March 31, 1886

Debit.		Credit.	
For funded and unfunded debt	$117, 248, 390	Customs	$99, 135, 000
Civil list and civil charges of all kinds	96, 070, 755	Excise licenses, &c	127, 300, 000
Army	85, 135, 420	Stamps (inland revenue)	57, 950, 000
Navy	63, 302, 545	Land tax and house duty	14, 450, 000
Naval and military operations	47 255, 000	Property and income tax	75, 800, 000
Afghan war (grant to India)	1, 250, 000	Post-office	40, 750. 000
Annuity (under Indian army pension deficiency act, 1885)	750, 000	Telegraph services	8, 700, 000
		Crown lands	1, 900, 000
		Interest on advances for local works and on Suez Canal shares	6, 880, 400
		Stamps in lieu of fees	3, 459, 465
		Receipts by civil department	11, 581, 640
Total	411, 012, 110	Total income	447, 906, 505
Charges for collection of revenue	50, 107, 110	Deficiency	13, 212, 715
Gross total	461, 119, 220	Total	461, 119, 220

Average minimum rate per cent. of discount charged by the Bank of England in each month since 1880.

Months.	1881.	1882.	1883.	1884.	1885.
January	3 5/16	5 1/2	4 1/2	3	5
February	3 1/2	5 1/2	3 1/2	3 1/16	5
March	3	4	3	3 1/16	3 1/2
April	3	3	3	2 1/2	3 1/2
May	2 1/2	3	3 1/16	2 1/2	2 1/2
June	2 1/2	3	4	2 1/2	2
July	2 1/2	3	4	2	2
August	2 1/2	3 1/2	4	2	2
September	4	4 7/16	3 1/2	2	2
October	3 9/16	5	3	2 1/2	2
November	5	5	3	4 1/2	2 1/2
December	5	5	3	5	3 1/16
Average	3 1/4	4 1/4	3 5/16	2 15/16	3

Mean relative humidity of the atmosphere for each month of the year ending September, 1886.

[Royal Observatory, Greenwich, W. H. M. Christie, esq., M. A., F. R. S., Astronomer Royal.]

Months.	Mean relative humidity (complete saturation=100).	Months.	Mean relative humidity (complete saturation=100).
1885.		1886—Continued.	
October	84	April	79
November	90	May	76
December	87	June	73
1886.		July	72
January	88	August	79
February	87	September	79
March	80		

THOMAS M. WALLER,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
London, October 30, 1886.

BRISTOL.

Report of Consul Lathrop.

MATERIAL WEALTH OF THE UNITED KINGDOM.

There have been attempts of late to discover and to estimate the material wealth of the United Kingdom, and some interesting series of figures have been presented, the most accurate and trustworthy of which come from the treasury department with the imprimatur of authority. These are presented in Tables A, B, and C, but they must be received with caution as approximation, not as certainty, for the nature of the subject will not, under existing fiscal conditions, allow of absolute accuracy. Taxes are levied upon income, not upon capital; and values in these tables are obtained by capitalizing income, at what seems in some cases an arbitrary number of years' purchase. For instance, in Table A the income from land, as shown by the income tax returns for the fiscal year ending April 30, 1884, is set down at about $318,500,000 which is capitalized at twenty-five years' purchase. Many English landowners would be glad to sell at twenty—not to speak of twenty-five—times their nominal rent income, and Irish land-owners are few indeed who would not accept twenty years' purchase. Again, many landlords while nominally maintaining their rents—which thus are entered in full in the assessment rolls—are forced to grant reductions each year of 20, 30, even 50 per cent., owing to agricultural depression. It is thus plain to be seen that the $8,000,000,000 given in Table A as the capital value of lands in the United Kingdom is many millions too high. The estimate in Table B of £1,000,000,000 ($4,866,500,000) as the value of movable property not yielding income (furniture, works of art, &c.), is simple guess-work, there being absolutely no data upon which to base a calculation; so also is the £300,000,000 ($1,459,950,000) set down in Table B as the value of farming stock and implements of husbandry, though there is obviously a better basis here for a calculation than in the case of furniture, &c. Despite these necessary uncertainties the tables are interesting and valuable.

Table A gives the total value of real property in the United Kingdom at $18,387,763,659, and Table B shows the total value of personal property at $27,412,000,000. The item of 2,600,000,000 in this latter table for fifteen years' purchase of one-fifth of the total income of the trades and professions is a flying shot which may not come within millions of dollars of the target.

The grand total of real and personal property in Great Britain is $45,800,000,000.

The figures presented in these tables as to investment in foreign properties are such as to excite high admiration for the splendid energy that has centered such enormous wealth in Britain. These figures, it should be remembered, are not, as are some in the tables, the result of refined speculations on the part of the treasury, but accurate returns from the income-tax gatherers, whose natural acumen is sharpened by a percentage on collections and whose persistence in ferreting incomes is such that little escapes them. Table B tells us that the income of the year from investments in foreign and colonial Government stock was $99,250,000; from investments in foreign and colonial private securities, $47,000,000; from foreign and colonial railways, $18,375,000, and from foreign investments accruing to investor under other divisions of tax schedule, $146,000,000; total, $310,625,000.

Such a sum, added to freights, commissions, travelers expenditures, loans made by England, &c., will easily explain how each year is corrected the enormous apparent trade balance against England.

REVENUE AND EXPENDITURES.

The returns upon which are founded the complicated calculations in these tables exhibit in an incomplete manner the sources of governmental revenues. I therefore present a full table, showing the revenue for the fiscal year ending April 30, 1886:

Source of revenue.	Amount.	Source of revenue.	Amount.
Customs	$96,488,095	Telegraph	$8,467,710
Excise	123,901,090	Crown lands	1,849,270
Stamps	56,402,735	Interest on advances	6,696,304
Land tax and house duty	14,064,185	Miscellaneous	14,638,432
Property and income tax	73,776,140		
Post-office	39,661,975	Total	435,945,936

The expenditures for the year for all purposes were $448,808,096, which it will be observed left a deficit of $12,862,160.

BRITISH TRADE DEPRESSION.

Trade during the year 1886 in the consular district of Bristol has moved in entire accord with general conditions; hence it is impossible to consider it independently in the first instance, and a wide preliminary survey must be made.

The long prevailing commercial gloom, though lightened during the latter months of 1886 by a few stray gleams here and there of returning activity and enlarging prices, has continued uninterruptedly throughout Great Britain. It is of interest to determine, if possible, the causes of this protracted depression, presenting, as it does, the unprecedented conditions in many branches, of undiminished, or even of increased production, with continually lowering and unremunerative prices.

The most widely operating cause of low prices and worthy to be mentioned first, on account of its general effect, not only on all the European nations but also on the United States, is the employment of gold alone as a measure of values. The adoption of the gold standard by Northern European nations, the suspension of silver coinage by the Latin nations, the resumption of specie payments in the United States, the sale of silver by the gold-adopting countries, all combined to unduly appreciate the value of gold as compared with its sister metal and with commodities. The result has been a long, slow, grinding adaptation to the new conditions, pressing unequally upon nations and upon individuals, and intensely aggravating a depression which in all probability would have occurred without a concurrent restriction of circulation by various nations, but which would have been, in all probability, by no means so severe. This subsidence of values has affected Great Britain quite as it has other nations, but being the richest of the European nations, and being so heavily a creditor of the world, she has felt the depression last, and thus, while continental countries have been driven to desperate exertions to improve and cheapen their manufactures and to find new and enlarge old markets, Great Britain has been asleep, and now when the pressure is upon her as badly as upon the others she wakes to find Germans, French, and Belgians actively disputing markets which she thought hers by prescription.

Conservative Great Britain, monometallic for seventy years, and its masses inclined to regard the relation of gold and silver as of something more than human origin, and sacrilegious to meddle with, looking eagerly this way and that for some explanation for unremunerative prices, is at last willing to look into the question of bimetallism, and a royal commission has been duly appointed to inquire into the question of the currency. In the mean time great public interest is manifested in the question, and able double-standard men are propagating their views with activity and enthusiasm. If commercial depression continues as acute as at present for a year or two it will not be surprising to find a radical change in English opinion on this matter, and perhaps a disposition to associate with other nations for the maintenance of an international bimetallic standard.

Foreign competition has also contributed to English depression. The unification of the petty German states into a great nation, and the direction and concentration into single channels, by a master hand, of forces hitherto diffused, has exalted the German nation, *per saltum*, into a successful and dreaded competitor of England. The heavy tariff of Germany which, combined with prodigal bounties, has produced an illusory and ephemeral activity and prosperity, might have been expected to prevent the nation from being to any extent a competitor in foreign trade; but they can export, and export largely, independently of bounties, and their ability to so do is largely due to the fact that labor has not participated in the advantages of the tariff. In other words, while the prices of commodities have been augmented by the tariff the wages of labor have not increased; hence manufacturers can compete in foreign markets, and they receive, besides, signal aid in various ways from the state. The French and Belgians, without so much state aid, have also cut not only into England's foreign markets, but into her home trade as well. Sometimes this latter is a question of freight charges—rates to London from say Antwerp or Havre being less than from Manchester, for example.

Not only are wages actually lower on the Continent, but the hours of labor are longer, sixty-five, seventy, even seventy-two hours per week

against fifty-four, fifty-six, and sixty. England is, however, not in all trades handicapped to the extent indicated by the money difference in wages. A quotation from the letter of the manager of a large works in Lower Germany to a brother ship-builder in England will illustrate my meaning:*

> I think that your men if they were to work here at our rates would stand about half-way between your and my figures. That is to say [comments the receiver of this letter] his men earn 5*s.* 6*d.* [per day] and our men 13*s.*, a difference of 7*s.* 6*d.* He would add 3*s.* 9*d.* to his men, which would be more than 50 per cent. added to his rate, so that he himself confesses that an English workman is 50 per cent. better than a German workman.

In some branches of manufacture the question of artistic skill and natural taste in the labor intervenes, and, particularly in France, is of assistance to the manufacturer in producing better and cheaper stuff than his English competitor. I find also, in examining the testimony of the various witnesses before the commission on depression in trade, that manufacturers charge, and advance striking instances as proof, that trade unionism has materially increased, in some branches, the cost of production in England, by forbidding superior pay to superior merit, by preventing men from working overtime, &c. A large manufacturer in Cork, Ireland, employing both English and Irish, went so far as to say that artisans disposed to do a fair day's work for a fair day's pay were the exception, not the rule, and that he attributed their less productive labor to trades unionism "as much as anything else."

After monometallism and foreign competition as causes of depression comes overinvestment during the active years of the last decade in certain kinds of manufacturing plant, and the consequent inability to find a market for the now largely increased output. In some trades, notably ship-building, when the natural demand ceased, employers, to keep their men employed and their plant from deterioriation, constructed either on their own account or on unduly easy terms, the result being an abnormal production, continuing for a considerable period beyond the really active years, and resulting, in shipping for instance, in redundant tonnage, low freights, ruined owners, and hungry sailors.

Investment in manufactures is rendered almost too easy in Great Britain by the simplicity with which limited companies can be organized, and the ease with which minute rivulets of capital can be concentrated. No doubt undue multiplication of small and sometimes badly managed limited companies has contributed to the injury of commerce. There were registered in the United Kingdom in the year 1885, 1,482 companies with a nominal capital of $530,193,539, of which $77,087,817 was paid up. In April, 1886, there were believed to be 9,471 registered companies carrying on business, with a paid-up capital of $2,577,481,789. Since the "companies act" became operative in 1862 there have been 24,622 companies registered with a nominal capital of $13,769,457,949,† so that 15,151 companies have in less than twenty-four years died a natural death, and $11,191,976,160 of nominal capital have disappeared from the register. This death list might be considerably increased to the signal advantage of commerce by the addition of numerous moribund companies now struggling for existence. The following figures

* Testimony of Mr. Price before the Royal Commission on Depression in Trade.

† In 1869 a company was registered with a nominal capital of $486,650,000, of which only $960 was ever paid up.

will show the principal purposes for which the companies registered in 1885 were organized:

Purpose of organization.	Capital.	Purpose of organization.	Capital.
Textile manufactures	$9,025,897	Engaging in foreign trade and commerce	$71,251,643
Metal manufactures	6,517,216	Mining	119,323,645
Manufactures other than textile or metal	49,229,076	Clubs	1,520,182
Banks, capitalists, and money lenders	83,197,684	Sundries	205,734,122
Ship-owners and builders	84,397,074	Total	580,198,539

Foreign tariffs have contributed much towards restricting the commerce of England. Not only have they actually limited her consuming area, but they have also, through the ease with which capital, skill, and machinery can be moved in these days, induced the transplanting of English manufactories. English manufacturers are now producing in the United States behind the shelter of the tariff, and there has also been some removal of plant to Germany. Since the German tariff was increased in 1879, five woolen factories from the neighborhood of Dewsbury* alone have been transplanted to Germany, though the testimony is that the "sanguine expectations of their owners have not been realized."

Great Britain is each year less a banker for the world and a central depot for the distribution of goods. Direct shipments from producer to consumer on the Continent now eliminate London more and more and deprive that center of large revenues in commissions and brokerage. Curiously enough, a combination of British vessels in the China trade discriminates in freights so seriously against London and in favor of Havre and Hamburg that a considerable trade is lost by London. The object of the discrimination is to cut out the German steamers.

Freight from China to London is 57*s.* 6*d.*; if the goods are forwarded on from London to Hamburg on a through bill of lading, the freight is only 40*s.* A considerable brokerage business has thus been lost to London, as continental consignees have been compelled by the differential rate to establish their depots in continental ports.

I have pointed out that the Continent is cutting out to some extent Great Britain in production. Let us see how the latter manages in distribution. Her own ministers and consuls shall tell us this. Though published, their several statements have never appeared grouped together, and I think they will gather additional weight and point from juxtaposition.

Sir Edward Thornton writes to his London chief, May 1, 1886:

> For many years past, I have been painfully impressed, during my residence on the River Plate, Brazil, and the United States, with the conviction that English merchants are indeed being driven out of the field by Germans, but that the latter attain this superiority, not by protection from their authorities, but by their own unaided and independent energy, by the greater economy of their establishments, and by downright hard work on the part of both chiefs and subalterns.

Sir Spencer St. John, British minister to Mexico, says:

> There can be no doubt, however, that up to the present time the English commercial community have shown the utmost apathy and indifference to the trade of this country and have left to the Germans, French, and Spaniards, the management of a commerce a fair share of which would fall to them if they would show the same qualities of thrift and industry which have distinguished their competitors. In the course of a very long experience, I have noted that the average English commercial man of

* Dewsbury is in the heart of the manufacturing district of the north of England.

the present day is unfit to compete with the thrifty and industrious German. The former is bent on the pursuit of pleasure, whilst the latter gives himself no leisure until the future is assured.

The consul at Leghorn says:

If a larger proportion of the requirements of consumers in this country is now supplied from Germany and Austria, I believe it may be traced in a great measure to the energy of their commercial travelers. There are also a considerable number of German houses here, in many instances started by young men who came here a few years back as employés. They are satisfied with small profits and live with the utmost thrift.

The consul at Boulogne says that foreign traders employ travelers to a far greater extent than British houses do; while the British official at Havre is surprised to find how seldom a commercial traveler comes there from England.

Mr. Consul Wrench, at Constantinople, says flatly that—

The main cause of the falling off in British trade rests with the merchants themselves, who, instead of imitating the example of the Germans (whose success they so much deprecate), think it unnecessary, from motives of economy or from indolence, to send agents or commercial travelers to foreign countries to advance their interests.

The consul at Cadiz writes that—

British merchants do not evince that amount of enterprise and self-reliance, nor do they appear to take that interest in the requirements of foreign markets, which is shown by their French, German, and Belgian competitors.

How striking is this unanimity of condemnation! How worthy of reflection by the manufacturers of the United States! The British merchant, Sir Edward Thornton tells us, is being supplanted on the Plate and in Brazil. Is it the American who is stepping into his shoes, who is profiting by what his own official calls his lack of enterprise and interest? Is it the American who is taking advantage, at his own doors, of the British apathy and indifference to Mexican trade which Sir Spencer St. John tells us exist? Is it the American whose energy, intrepidity, and thrift is the subject of unwilling praise from a chorus of British officials? On the contrary, his name is never mentioned. He stands by, apparently, with folded arms while the "thrifty" German fights with Britain for her trade.

The above review of the manufacturing and commercial interests of Great Britain is, I fear, more truthful than cheering, and it must be admitted that the prospect of the maintenance by this country of her commercial supremacy is not flattering. Even her magnificent shipping interests will be obliged to contend with enormous odds, not only in building and sailing bounties lavishly bestowed by Germany, France, and Italy, but also in the lesser cost with which these continental ships can be sailed, the difference being principally in wages. A large ship-owner has testified that a German vessel with which he was familiar, of 458 tons, cost $2,778 per year less to run than an English vessel of about the same size. A second comparison between a German vessel of 603 tons and a British vessel of 545 tons showed $1,776 in favor of the former. A British ship known to this ship-owner was transferred to the Danish flag and the saving on wages alone for the first year was $2,112, which being about 5 per cent. of the cost of the ship to the Dane, meant the difference between a bad and a lucrative investment.

BRITISH AGRICULTURE.

I have not heretofore alluded to farming interests, but that they and manufactures are mutually dependent in Great Britain is obvious; and their calamitous condition has been no insignificant factor in demoralizing the manufacturing interests.

The following table shows that in the decade ending with 1886 there had been an increase in Great Britain of permanent pasture to the extent of nearly 2,250,000 acres, and a decrease of wheat acreage of more than 1,000,000:

Description.	1875.	1886.	−Decrease. +Increase.
STOCK.	*Acres.*	*Acres.*	*Acres.*
Wheat	3,342,481	2,285,905	−1,056,576
Barley or bere	2,509,701	2,241,164	− 268,537
Oats	2,664,009	3,081,596	+ 417,589
Rye	54,903	55,926	+ 1,023
Beans	564,181	381,186	− 172,995
Peas	316,375	214,388	− 101,987
Green crops	3,664,107	3,480,480	− 183,627
Flax	6,751	3,068	− 3,683
Hops	69,171	70,127	+ 956
Bare fallow	557,979	552,898	− 5,081
Rotation grasses and clover	4,354,071	4,689,200	+ 335,129
Permanent pasture	13,312,621	15,536,279	+2,222,658
LIVE STOCK.	*Head.*	*Head.*	*Head.*
Horses	1,340,129	1,425,359	+ 85,230
Cattle	6,012,824	6,646,583	+ 633,759
Sheep	29,167,438	25,520,718	−3,646,720
Pigs	2,229,918	2,221,475	− 8,443

All economists calculate that in England and Wales alone there is $200,000,000 worth less of food annually produced than was produced ten years ago, and the production is certain to decrease further, for farm-land, to be worth tilling, must bring on an average $25 to the acre, and this it cannot do at present consuming values. Nor is there prospect that in the future crops can be profitably grown in competition with India, the United States, and other countries having a surplus. The result will each year be an increasing acreage of land untilled and left to grow grass for pasturage, with the result of deterioration of the land, of land-owners with diminished incomes, of farmers without farms, and of agricultural laborers without employment, and of traders and manufacturers without buyers. The farmers ask governmental aid in protecting them from the intolerable and irresistible foreign competition. One asks for protective duties on foreign grain, another asks for a duty on foreign manufactures, out of which shall be paid a bounty for rotating crops. But manufacturers dare not imperil their foreign markets by such momentous concessions.

BANKRUPTCY.

During the present century there have been enacted in Great Britain more than ten bankruptcy acts, the last of which, that of 1883, now having been on trial for three years, is worthy of attention. Said the master of the rolls in the case of Reed, Bowen & Co.:

> This act of Parliament was passed because it had been proved to the satisfaction to the legislature that a majority of creditors, however large, was not careful and was not to be trusted; on the contrary, was careless; that they practically dealt with bankruptcies to this effect; that they in their own judgment wrote off the debts as utterly bad, but that they agreed to terms which might give some possibility or an evanescent chance of their getting something out of the wreck, and it was because of the knowledge and prudent behavior of creditors with regard to insolvent debtors that this act of Parliament was passed, which takes away from the majority of creditors that power which they had too recklessly and carelessly used, and puts the controlling power into the hands of the court for the purpose of protecting themselves against their own recklessness; for preventing a majority of creditors from thus dealing so recklessly, not only with their own property, but with that of the minority of creditors, and for the purpose of enforcing, so far as the legislature could, a more careful and moral conduct on the part of persons who eventually become insolvent debtors.

In the act of 1849 officialism was the controlling idea, and the result of

that act being eminently unsatisfactory the act of 1869 was a swing to the other extreme and a permission to the creditors to take the best care of themselves. This again proving unsatisfactory, the act of 1883 was introduced with a swing back toward officialism. But in the act of 1849 no governmental department was specially charged with the supervision of either the conduct of the debtor or the administration of estates, the officials all being attached to the court. Now, in the 1883 act the control of nearly all bankruptcy administration is removed from the courts to a department, and that department in the person of the official receiver is interjected into so much of bankruptcy business as still comes under the cognizance of the court.

The Board of Trade is made the guardian of creditors and the inspecting and restraining authority over trustees in bankruptcy and their accounts and the depository of their funds, which the Board lodges in the Bank of England to the credit of "the bankruptcy estate account." The Board appoints an official receiver for each bankruptcy district, who is also an officer of the court having bankruptcy jurisdiction, and who has multifarious duties in connection with bankrupts and their estates. This officer, when a bankruptcy petition is presented to a court, is immediately appointed interim receiver of the debtor's property and protects it until more permanent arrangements are made. He also obtains full information as to the condition of the insolvent estate for the benefit of the creditors, and it is one of his most important duties to protect the interests of the general public by inquiring into, exposing, and providing for the punishment of fraudulent and reckless trading or culpable extravagance.

Creditors may deal with a debtor's estate by composition or arrangement; but they have only slight power with respect to discharge of debtor. This power is in the court, who may grant, refuse, suspend, or make conditional the discharge, not entirely at its discretion, however, but by the application of well-defined rules to the special cases. Creditors, however, have a voice in the question of debtors' discharge, and it is listened to by the court with whom the decision finally rests, but experience has shown that creditors are either supine or needlessly lenient and even sometimes amenable to improper influences; the act makes the report of the official receiver the chief guide for the judge.

It is quite recognized in the act of 1883 that creditors have rights in respect of the estates of their insolvent debtors,* but it says that these shall be subordinated to a higher law, namely, the interests of commercial morality and of the state in maintaining integrity. In framing the act of 1869 it was supposed that creditors would not lose sight of the greater result while taking care of their individual interests, but as it turned out they hopelessly failed in their duties, not only to the community, but to themselves and to each other, and by common consent the act of 1883 is admitted to be an immense improvement, not only in taking cognizance of the business conduct and course of trading of the debtor, but in supervising and partially controlling the administrators of all insolvent estates.

The very searching examination of the bankrupt as to the conduct of his business for a period long anterior to his failure, has been productive of good results. The creditors, the courts, and the world see placed before them an exact account of the way in which the bankrupt became embarrassed, and can trace his gradual decline through every step. If there has been fraudulent or reckless trading it is certain to come out; and the important provisions of the bill under which it is brought out have proved undoubtedly a deterrent to some extent to careless and dishonest trading.

The bankruptcy act of 1869 was operative throughout 1883. The figures for this year are "almost identical with the annual average of the fourteen years during which that act was in operation. Hence the comparison with 1883 is a comparison with average results under act of 1869."

Years.	No. of cases.	Estimated liabilities.	Estimated assets.	Estimated deficiency.	Percentage of assets to liabilities.
1883	8,535	$103,501,456	$29,138,382	$74,363,073	28.1
1885	4,333	43,982,400	15,052,819	28,929,580	34.2
Decrease	.....	59,519,056	14,085,563	45,433,493	*6.1

* In all estates over £300 worth of assets they appoint their own trustee and committee of inspection, whose actions and accounts are, however, subject to the approval of the Board of Trade.
† Increase.

This table shows that loss to creditors through bankruptcy in 1885 was less than the average loss of preceding years by forty-five millions. Indeed, the inspector-general of bankruptcy claims in his report fifty-five millions. Such a splendid result is solid in the main and is due partly to a firmer basis of trading, induced by long years of depression and weeding out, partly to the beneficent effects of the new bankruptcy law and partly to the fact that the uncertainties attendant upon the execution of a new and complicated law have induced a proportion of debtors and creditors to quietly compound without publicity. The stringent bankruptcy law in the background has, however, stimulated the debtor to a better settlement than would perhaps have been made under the old statute. The Manchester Guardian Society, for example, is instanced as receiving an average of 42 cents on the dollar on compositions accepted by them in 1884, as against an average of 26 cents for the five previous years.

But there is good reason to believe that the number of private arrangements have not been greatly increased by the act. Independent inquiries, through bankers, made by the Board of Trade, show that there has been a striking diminution in the number of insolvencies during the past year, and that there has been within the knowledge of the bankers—a class certain to be well informed—no increase of private arrangements. Similar testimony comes from great trading organizations, and we must therefore conclude that the notable diminution of loss to traders in 1885—$45,000,000—through bankruptcy, is a solid and bona fide improvement.

Not only does the table show this great decrease in losses, and a reduction of one-half in the number of cases, but it also shows that the assets averaged 34 per cent. of liabilities against 28 per cent. under the old act. The collection of assets has also been conducted at a considerably reduced cost, as the following table shows:

Percentage of costs, both under the bankruptcy and liquidation clauses of the act of 1869 *of closed cases realizing less than* £300, *as compared with the percentage of costs of similar estates wound up by official receiver under the act of* 1883.

Percentage to—	Under 1869 act—non-official administration.		Under 1883 act—official administration.	
	In bankruptcy.	In liquidation.	1884.	1885.
Gross assets	51.96	50.69	33.	35.98
Net assets	74.64	64.20	37.9	41.72

The cost of administration has thus been reduced by about one-third.

When it is remembered [says the inspector-general of bankruptcy] that under the present act, in addition to all the work done under the old, there is also the duty of investigating and reporting on the debtor's conduct, that the amplest guarantee is afforded to creditors for the due administration of the funds of an estate, by virtue of the security required from the trustees, the control of the funds, and the official audit of all accounts, that the information now afforded to creditors is of a much ampler character than that formerly given, and that the creditors have the advantage throughout the administration of supervision by a highly trained body of officers of large experience, acting entirely free from partial or interested motives, it will be seen that while the actual cost of administration has been greatly diminished, the services rendered in respect of such cost have been materially increased.

The following figures show the percentages of cost in cases where the estates realized over £300.

Act.	Estates realizing £300 and under £1,000.		Estates realizing between £1,000 and £5,000.	
	Percentage to gross assets.	Percentage to net assets.	Percentage to gross assets.	Percentage to net assets.
Under 1869 act (year 1882)	39.28	52.68	24.44	29.47
Under 1883 act (year 1885)	25.00	28.00	16.00	18.00

Analysis of costs showing under different heads the proportion per cent. of such costs to the gross assets realized in all estates wound up by official receivers during the years 1884 *and* 1885.

Items.	1884.	1885.
	Per cent.	*Per cent.*
Board of Trade and court fees, including commission on realizations	13.62	14.16
Law costs (petition)	3.61	3.83
Law costs after receiving order	.92	1.74
Fees for keeping possession, &c	1.99	2.12
Special manager	.06	.03
Assistance to debtor in preparing statement	.30	.50
Auctioneer	5.13	5.25
Other taxed charges	.55	.79
Gazette notices	.82	.92
Incidentals	2.26	2.35
Totals	29.26	31.69

The total expenditure on account of bankruptcy proceedings for the year ending 31st March, 1886, was $842,736, while the receipts for the same period were $964,068, showing a surplus of $121,332.

A striking evidence of public confidence in the act is given in comparing the proportion of bankruptcies to schemes and compositions with a similar proportion under the old act.

It may be assumed [says the report], looking to the actual testimony of experience regarding the conduct of insolvent debtors, that under any really sound system of administration which takes that conduct into account, schemes of arrangement and compositions under which a debtor secures his discharge will be the exception and adjudications the rule.

The following table shows the above-mentioned proportions:

Percentage of adjudications, schemes of arrangement, and compositions to total cases.

Period.	Adjudications.	Schemes.	Compositions.
Old act.	*Per cent.*	*Per cent.*	*Per cent.*
Average of thirteen years from 1869 to 1882	11.86	53.25	34.89
Year 1883	12.23	53.43	34.34
New act.			
Year 1884	90.03	1.72	8.25
Year 1885	91.51	1.80	6.69

We see that under the new act 91½ per cent. of cases have been adjudications against 12 per cent. under the old act, a significant proof of public confidence in the honesty, celerity, accuracy, and comparative inexpensiveness of official administration.

The following table shows the average assets and liabilities per case in adjudications, schemes, and compositions:

Period.	Adjudications.			Schemes.			Compositions.		
	Assets.	Liabilities.	Percentage of assets to liabilities.	Assets.	Liabilities.	Percentage of assets to liabilities.	Assets.	Liabilities.	Percentage of assets to liabilities.
Old act.									
Average of 13 years, 1869–1882	$3,557	$21,091	17	$4,087	$11,421	35	$2,243	$7,703	29
Year, 1883	2,151	20,103	11	4,827	13,884	35	1,640	6,472	25
New act.									
Year, 1884	3,596	13,845	26	28,876	41,579	70	11,100	22,054	30
Year, 1885	2,963	9,202	32	32,933	46,640	51	4,934	13,314	37

The following table, which tells us of a loss to creditors in sixteen years through bankruptcy proceedings of $1,166,000,000, is a striking commentary on human frailty; for experience has shown that the great proportion of bankrupts are such from their own ignorance, recklessness, or want of principle.

Estimated annual loss arising to creditors in England and Wales through bankruptcy proceedings during the period from 1870 *to* 1885.

Year.	Assets.						Total liabilities.‡	Net estimated loss to creditors.
	Liquidations.	Bankruptcies.	Total.*	Amount after deduction of one-third for expense of realization.	Compositions.†	Total assets for dividends.		
1870	$10,877,556	$9,565,538	$20,443,094	$13,628,730	$5,746,134	$19,374,864	$84,951,710	$65,576,846
1871	11,043,899	2,699,788	14,643,687	9,762,457	5,838,507	15,595,964	68,904,086	53,308,122
1872	12,926,665	3,027,673	15,954,328	10,636,217	5,042,657	15,678,874	69,529,719	53,850,845
1873	19,634,152	3,284,999	22,919,151	15,279,432	5,978,695	21,258,127	93,362,887	72,104,760
1874	16,847,302	2,362,418	19,209,720	12,800,481	7,224,368	20,030,849	97,995,104	77,964,255
1875	22,378,468	4,675,514	27,053,982	18,035,988	8,630,986	26,666,974	124,259,478	97,592,504
1876	18,974,770	2,522,564	21,497,334	14,331,555	8,506,865	22,838,420	101,580,152	78,741,732
1877	19,544,462	2,368,184	21,912,646	14,608,430	7,243,570	21,842,000	94,708,724	72,956,724
1878	26,441,504	9,639,227	36,080,731	24,053,819	7,976,053	32,029,872	145,867,205	113,837,333
1879	35,564,377	2,777,374	38,341,751	25,561,169	11,265,485	36,826,654	144,428,925	107,602,271
1880	16,244,089	1,639,703	17,883,792	11,922,529	4,996,076	16,918,605	78,781,996	61,863,391
1881	17,425,661	1,555,883	18,981,544	12,654,365	4,820,010	17,474,375	86,036,532	68,562,157
1882	19,030,000	1,949,062	20,929,062	13,986,043	5,752,227	19,738,270	92,989,373	73,251,103
1883	22,064,881	2,248,921	24,313,802	16,200,292	4,824,579	21,033,781	103,501,455	82,462,674
1884	4,532,944	10,667,421	15,200,365	10,133,580	4,830,142	14,963,722	68,082,308	53,118,586
1885	1,866,809	11,755,604	13,622,413	9,081,609	1,430,405	10,512,014	43,982,399	33,470,385
Total	276,297,529	72,739,873	349,037,402	232,691,606	100,091,759	332,783,365	1,499,052,053	1,166,268,68

* Estimated amounts. † Actual amounts. ‡ Partly estimated and partly actual amounts.

Though the new act is not without defects, which will probably be corrected by the legislature as time shall disclose them more fully, it is a natural evolution through numberless statutes from the simple beginning of Henry VIII, and is a vast improvement upon its progenitors. One cannot regard with favor the extreme tendency towards centralization existing now in Britain, nor can one sympathize with the demand so generally made that Government shall attempt a solution of every social problem; but a stringent control of bankruptcy matters is peculiarly within the province of the supreme authority of the state, and is essential to the healthy development of commerce and commercial morality. In exercising this power the British Government has produced a bankruptcy law highly beneficent in its effects, and worthy the most careful study and attention of other nations.

SUGAR.

The beet crop of the world in 1870 reached 942,000 tons, while in 1884–'85 it had increased to 2,545,000 tons. The cane crop in 1870 was 1,661,000, while in 1884 it reached 2,260,000 tons. Thus in 1870 the beet industry produced 37 per cent. of the total supply, while in 1884–'85 it produced 53 per cent.

The consumption of sugar in the United States and Europe has risen from 2,600,000 tons in 1880 to 3,700,000 in 1885; but production, fostered and stimulated by the continental bounties on beet-root growing, has outstripped consumption.

The proportion of bounty-fed and non-bounty-fed sugar in the consumption of the United Kingdom has risen from 5 per cent. in 1863 to 26 per cent. in 1873, to 37 per cent. in 1878, and to 55 per cent. in 1885.

Bounties have been largest in Germany and Russia. During the first nine months of 1886 Great Britain imported from Germany nearly 4,000,000 cwt. of raw sugar, and 1,250,000 cwt. of refined sugar not one pound of which would have been imported, nor would the beets that made the sugar have been grown, perhaps, if natural laws had been allowed to govern the competition between cane and beet sugars; but under the fertilizing effects of the bounty the German crop has increased from 412,000 tons of roots in 1879–'80 to 2,500,000 in 1884–'85. The bounty amounts to about $9.70 per ton of sugar, but it is difficult to say exactly what it is, owing to the indirect method of figuring it, the method pursued being to levy a duty or tax upon the growth of beet-root, and then upon its manufacture into sugar to repay the tax upon the assumed or estimated number of tons of beet that were employed. In practice this estimate is always too high; in other words, the saccharine matter in the root is much underestimated, and hence the receipt of a drawback on numbers of acres of beets never grown. The method is analogous to that until very lately in existence in the United States for paying a veiled bounty to refiners, and, though commending itself to France so strongly that it has lately adopted the same system, our consul-general at Berlin in a late able report tells us that it is so unsatisfactory in its results to the Germans that strenuous efforts will be made to alter it.

The import of refined sugar from Russia sprung from almost nothing in 1875 to 800,000 cwt. in the first nine months of 1876. Under the influence of a heavy protective duty the beet crop rose from 275,000 tons in 1879–'80 to 370,000 tons in 1884–'85, and to 500,000 in 1885–'86, and there was an enormous accumulation of refined sugar for which there was no home market; hence in the spring of 1875 the Russian Government surprised the refiners of the world by announcing the unprecedented and extravagant bounty upon refined-sugar exports of

$1.50 per cwt., which was afterward reduced to $1.20. The measure was not intended to be permanent. The Russian minister of finance is reported to have declared in April, 1886, that the then existing bounties had had the desired effect of freeing the Russian market from the accumulated stocks, and that it was not the intention of the Government "to supply foreign consumers with cheap sugar at the cost of the Russian state and of Russian consumers." I have in vain sought for information as to whether this bounty still exists, but it is believed in England that it does, though the accumulated stock having been got rid of it does not stimulate exports as formerly.

The import of refined sugar from France during the first nine months of 1886 was less than 500,000 tons. This nation, the first to adopt, more than twenty-five years ago, the sugar-bounty policy, stimulated production to a maximum of 465,000 tons of beet roots in 1875. In this year reductions were made in the amount of bounty, and again in 1880, and production fell off to about 300,000 tons. But in 1884 a heavy bounty was again granted to certain classes of sugars to enable them to compete with what is known as moist sugar in England. Naturally the makers of loaf-sugar also demanded state aid, with the result of the introduction this year of the German system so well worked as to produce enormous bounty. The effect of this new legislation has just been felt in this country. Fine French crystals are selling for about $3.50 per cwt. It is this irruption of French sugar which has so suddenly supplanted the American granulated since November, 1886, though the simultaneous lowering of the American drawback was also a factor, though I suspect not quite so important a one.

The import of refined sugar from Holland and Belgium—all bounty-fed—amounted during the first nine months of 1886 to nearly 1,000,000 cwt.

The imports of refined sugar from the United States were, in 1883, 6,254 tons. In that year a rate of drawback was established that amounted to so considerable a bounty that in 1884 the import sprang up to 52,113 tons and in 1885 to 114,930 tons, and during the first eleven months of 1887 to 1,418,110 cwt. (70,900 tons). The secretary of the British Sugar Refiners' Committee said in April, 1886:

> I am in a position to state that it—the sugar bounty in America—is exactly £2 ($9.70) per ton or 2*s.* (48 cents) per cwt.; that is the legal bounty.

How he got into a position that enabled him to state what the American Government and many individuals were endeavoring in vain to discover, I am unable to say; but from his statement and those of others, it may be said that the general idea in England is that the American bounty amounted to between $7.40 and $9.70 per ton. The Russian, German, and American bounties have been what the English refiners particularly feared during the past year. They could cope, they said, with the French, Dutch and Austrian, but they find they cannot cope with the new French bounty. The reduction of the United States drawback, which went into effect on November 1, 1886, on refined sugar, from $2.82 per pound to $2.60 was simultaneous with a large import from France of absurdly cheap crystals (the effect of increased bounties) so that the American granulated has been driven from the British market during the last month of 1886, and was seriously interfered with during a considerable portion of the year, the import being reduced by more than 35,000 tons.

Even if in future relieved of the extraordinary competition of the French bounty, I cannot see that the United States can compete in this market, except that the new drawback amounts to a bounty, or that plethora of stock will force the refiners to throw some on this market

regardless of returns. We have seen that in Russia in 1875, and in France in 1886, when the home market became blocked, the Government interposed and paid the refiners largely that they might ship abroad. In Germany last year the refiners voluntarily limited production, or there, too, would have been observed an enormous overplus which refiners would in a probability have asked the state to help them unload. The fact is, the continental sugar industry has become a confirmed parasite of the state and is helpless, enfeebled, and doomed to die if the support be removed. The United States refiners cannot compete in Europe unless they, too, are subsidized by the Government.

It is worthy of attention that the English refiners are not only handicapped by the actual cheapness of foreign refined sugar, but also by the uncertainty that attends the action of foreign Governments. The enormous bounty of Russia came without notice, and is said to have reduced the values of fine sugars 75 cents per cwt. The bounty lately introduced by France has cut prices severely. If the refiners are stimulated to economy in processes and to improvements in machinery, to meet the foreign competition, they no sooner go earnestly to work than they are disconcerted by some unexpected foreign action. So they are all thoroughly discouraged, and one by one are closing their refineries. In this connection it is worthy of note that the receipts of unrefined sugar in Great Britain for eleven months of 1886 from the Continent, as compared with corresponding period of 1885, show a falling off of 67,413 tons, while the corresponding figures with respect to refined sugars show an increase of 64,000 tons. A volume could not show more clearly than do these figures the disadvantages under which English refiners work.

Again and again have they petitioned the Government for aid. Again and again have they pointed out that not only were large refining interests ruined in England and thousands of men driven out of employment, but that large cane plantations in the colonies, particularly in the West Indies, were going out of cultivation, that their owners were being ruined, and that their laboring population were reduced almost to starvation. But the answer of the Government has always been that if foreign Governments were guilty of the economic folly of providing cheap sugar for England, that England would not balk their aims by interposing a countervailing duty. But this answer has been esteemed by failing refiners and ruined planters as poor consolation; and the people who have had the benefit of the cheap sugar, I think, so far as I can judge, agree with them, and would willingly sacrifice a penny or two a pound on sugar, and, in this particular instance, their robust free-trade principles, in order to maintain their domestic and colonial sugar interests.

EXPORTS.

The general export trade from this consular district for the past year needs no special comment, as its condition remains about as last year. The experience of a large firm of galvanized-iron manufacturers, in shipping their product hence to Australia, is worthy of note, however. It appears that an Australian freight ring of great power exists in London, and that the Bristol firm, in order to be able to ship at all, were forced to sign an agreement binding itself to ship only by ring ships.

On several occasions opposition vessels to those of the ring were put on, and then the rates suddenly dropped from 20*s.* or 25*s.* a ton to 10*s.* or 7*s.* 6*d.* These sudden and excessive falls and rises of freight are due entirely to the existence of the ring, no such feature having existed prior to its formation.

Finally the Bristol firm took advantage of an advantageous opposition offer, and loaded a cargo from Bristol to Melbourne and Sydney

with the result that the ring refused to carry their goods any more except at a prohibitive rate. "The consequence is," say this firm, "we must either submit to the dictation of the ring or combine with others to oppose. The combination is most injurious to artisans, merchants, manufacturers, ship-owners, and Australian colonists. It is also a potent cause of depression in trade by unduly weighting English manufactures with rates of freight in excess of what foreign manufactures pay to our own colonies."

The exports from this consular district to the United States show an increase of $50,000 in value for the year ending September 30, 1886 (Tables D and E). The decrease in exportation of tin-plates ($109,000) is nominal not real, owing to the circumstance that these shipments, though still leaving Bristol, are declared at other consulates, mostly at London. The increase of $7,000 in the value of Bath bricks shipped is due to enlarged production, a new company having been organized to handle the peculiar scouring-sand of the Parrett River bed. The new export of $63,000 worth of woolen yarns is due to the enterprise of a single firm who inaugurated a trade by sending a traveler to the States. The shipment of waste-lead fumes is a new export of lead fumes, which are secured by a patent process, instead of, as is often the case, being lost. The product is cheaper than zinc fumes, and to some extent is capable of taking the place of the latter in manufacturing. The export of wool from this district is due to the great demand in the States, which induced American buyers to scour this country thoroughly for small lots.

IMPORTS.

The import trade of Bristol is largely made up of provisions. In this connection I wish to draw special attention to the way in which Canadian cheese has supplanted the United States product. The Canadian cheese is imported each year in increasing quantities in the Bristol district, and finds each year increasing favor, both with dealers and consumers. While the import of all foreign cheeses fell off in Liverpool in 1886 by 250,000 boxes, the import in Bristol from Montreal increased by 12,000 boxes—total for year 201,000 boxes—and the receipts from New York fell off considerably. Great Britain manufactures each year 135,000 tons—and good cheese, too—valued at about $35,000,000. Now, the very prince of English cheese is held to be the Cheddar, made in Somerset; and yet Canadian cheese made on the Cheddar principle has actually, right here in Somerset, where I write, been sold for a penny a pound more than a cheese actually made in Cheddar Valley.

There is a hot controversy now raging in the English papers as to whether Cheddar cheese is the result of particular herbage and pasturage, or of a particular mode of manipulating the milk; and I think that all but Somersetshire men are pretty well agreed that this toothsome cheese is the result of superior methods rather than of special grasses. And the Canadians have gone on improving until they have surpassed their teachers; but the United States do not appear to have proportionately advanced, or if they have they consume their best makes at home. A large dealer and importer writes:

> I import largely of Canadian cheese. I find it preferable to States cheese. It is finer in flavor and arrives here in much better and cooler condition (which is a very important matter during the summer months). It also maintains its mild flavor much longer than States cheese.

My correspondent attributes the inferiority of the American cheese to Canadian to climatic conditions not so favorable; but whether he is right I am not able to say. I can only point out in what ways our

American products are held to be lacking, leaving it to those who manufacture at home to seek out the causes and supply deficiencies.

The import of both Canadian and States butter has fallen off somewhat during the past year, owing principally to the fact that butterine made on the continent has been more acceptable to the palates of those who sought a cheap butter than the real article, if it had become, as it sometime does, stale. But here, again, we find the falling off largely with the States butter.

I am indebted to Mr. Symes, our vice-consul at this port, for the following report on American bacon. The recommendations therein contained are worthy of careful attention, as Mr. Symes has a large practical knowledge of this trade.

The consumption of American bacon in this district during the past year or season has been somewhat limited, the much more extensive breeding and feeding of hogs both in Ireland and England being the cause, as was the case last year, of all the markets being well supplied with what is described here as home-cured meat, which as a rule is preferred by the English public. As long as feeding stuffs are so plentiful and obtainable at such low range of values, as now for some time has been current, this state of things is certain to continue in Great Britain and Ireland.

Complaints have been made this year that the American packers have gone to the other extreme in respect to salting their meats, and whereas before this present season the article was objected to because it was too heavily salted, it is now losing favor and values are often somewhat depreciated, because there is not sufficient salt used either in the curing or the packing.

Singed and scalded long sides, Cumberland cut and bellies, have no doubt been shipped insufficiently cured and insufficiently salted to stand all the risks of the voyage of importation, consequently much bacon that no doubt when it left the packers' hands was apparently good and handsomely packed, has, on its arrival in the English markets, become more or less out of condition, and disappointing to the importer. On the other hand it must be admitted that some sorts, for instance, long clear backs, singed Staffordshire and hams have been well cut, well packed, and found more favor than ever. The condition and appearance of these meats have certainly on their arrival been more tempting to buyers, and all that could reasonably be desired, giving, to say the least, general satisfaction and meeting a good and fairly ready sale.

The system of packing bacon in borax is losing favor; in fact, there is a growing objection to this style of packing, as the meat will not keep good, and invariably if the importer cannot place it immediately on its arrival for prompt and quick sale he suffers loss by deterioration, &c.

The demand for American bacon will not continue at all on a large scale unless more care than ever is bestowed, (1) in the cut—the pieces of the hog must be neatly cut and trimmed uniform in size and evenly cured; (2) in the cure—the cure must be complete so that the meat cannot become tainted; (3) in the packing—salt is necessary not only to keep the meat clean but to prevent injury from heat and other causes whilst in transit *en voyage*.

Bacon packed in salt seems to stand the voyage much the best, and on arrival the turnout is always better than when otherwise packed; indeed it is usually preferred and desired that most of the various cuts be carefully and lightly salted in the cure and in the packing.

Refined lard has found an increased consumption, and the business in that article, although it is stated not very profitable, has been fairly satisfactory.

PETROLEUM.

Petroleum was imported into the United Kingdom in 1886 to the extent of 1,250,000 barrels, of which 120,000 came to Bristol. Last year the Russian opposition menaced our English market, but during 1886 the Baku product has been out of the field, though to keep it out prices ranged unusually low during the year, though in December they recovered to 14 cents per gallon. It seems from what I can hear within the limits of my district, that the question as to whether it shall be Russian or American petroleum is entirely or almost entirely a question as to price. Though the oils appear to differ somewhat in their attributes, yet what one lacks in one respect appears to be compensated by some advantage in another respect. We have the control of the trade and a reputation for our brands, and the Russians must give decided advantage as to price to overcome these; and it is doubtful if they could do this, with the wasteful methods in vogue at Batoum, even if the American refiners were supine during the contest, which is rather far from likely. Russian petroleum would probably not have been seen on the British market in 1885 had it not been for the continued complaints from consumers as to the quality of the American oil. When the quality improved, the Russian oil was driven out of the market. A large dealer writes me:

In consequence of the American refiners having reverted to the satisfactory standard of quality which they formerly shipped, and which gave satisfaction in this market, the demand here for Russian has become very small and this will no doubt continue as long as the quality of American is maintained.

Another very large firm of importers do not, I regret to say, speak so well of the quality of the oil, and they specify one cargo, "shipped under what are considered the most favorable climatic conditions, viz, in June," in regard to which "much fault was found."

The petroleum tested during the year ending May 31, 1886, by the British Petroleum Association was almost entirely American. About 2,000 samples flashed under 77°, while 914 flashed at or above 77°. Of the high test the greatest number flashed about 107°. As to color, 57.6 per cent. were graded as standard white, 27.4 as prime white, 3.5 as superfine white, and 6.6 as water white. About 5 per cent. were inferior to standard white in color, but the inferior stuff was usually so distributed as to be within the proportion, and only about 15,000 barrels out of 582,000 were certified as unavailable for tendering on contract.

There seems to be imminent a change in methods of conveyance, and tank-steamers will probably be more and more used. A considerable number are already in use by the Russians. Their employment will probably considerably reduce the cost of carriage notwithstanding that they must return in ballast. Their introduction has met with disfavor in New York amongst a class whose labor in some degree they supplant, but the objections to them would apply to any new mechanism that saved labor, and it is to be hoped that if they are found to be a real advantage, their introduction will not be delayed even though it involve a considerable change in present procedure. The explosion at Liverpool within the past few days of a tank-steamer will probably be used throughout the world as a powerful argument against the system, but gross carelessness existed here, and with reasonable precaution the accident would never have happened.

LEATHER.

Messrs. Dove & Wilcox, large importers and dealers, write:

So far as the British leather trade is concerned we must characterize the past year as one marked by no special features. A large volume of business has been done at

prices which have fluctuated only a little, but which have in the net result left us on a level some 5 per cent. lower than occupied twelve months ago. On the whole the business done has been sound and healthy, and our factors and merchants have not to mourn over any large deductions from their profits caused by the failure of their correspondents. In American leather it gives us pleasure to record a very considerable augmentation of the trade of this port. Other houses have shared in this development, and, speaking for ourselves, we find that during the nine or ten months of 1886 already elapsed we have already imported 30 per cent. more weight of American produce than we did during the whole of 1885, and for it all we have had a ready market. The traffic has obtained indeed a firm foothold here, and exists on such a basis as promises to secure its permanency. A healthier specimen of trade and commerce it would not be easy to discover.

The comments of this firm on the increase of the American leather trade are of the same tenor as the information I have received from Davies & Co. and other large factors. It is a pleasure in these days of depression and gloom to be able to record such satisfactory conditions obtaining in our American export leather trade.

NAVIGATION.

I have dealt so fully in previous reports with the general trade conditions existing at Bristol that it is unnecessary for me here to go into them at any length, though I must not omit to mention the important operations that have been carried on by the city government to improve the navigation of the Avon. The effect of the extensive work of the city will not be entirely perceptible for another year to come, but at the expiration of this period the depth of the river from the Bristol docks to its junction with the Bristol Channel will practically be increased by 3 feet, thus opening the river to vessels drawing 27.6 feet; a signal improvement, and one that will probably result in the discharge at Bristol of many cargoes that are now discharged at some inconvenience at the city's docks at the mouth of the Avon.

In concluding, I wish to express my appreciation of the courtesy of Mr. F. B. Gridlestone, the secretary and general manager of the Bristol docks, who is always most kind in extending what information I may desire relative to his department.

LORIN A. LATHROP,
Consul.

UNITED STATES CONSULATE,
Bristol, January 7, 1887.

TABLE A.—*Value of real property in the United Kingdom, calculated by reference to the assessments to income tax for the year* 1883–'84.

Description.	Income.	No. of years' purchase.	Capital value.
Lands	$318,472,492	25	$7,961,837,325
Messuages and tenements	618,288,825	16	9,892,621,200
Other profits from land (manors, fines, &c.)	4,151,124	25	103,778,112
Quarries	4,443,114	7	31,101,801
Mines (one-half)	17,188,478	7	120,358,411
Water-works (one-fifth)	2,929,633	20	58,592,660
Canals, &c. (one-fifth)	8,190,319	20	163,806,390
Fishings	2,783,638	20	55,672,760
Total value of real property in United Kingdom			18,387,763,659

TABLE B.—*Value of personal property in the United Kingdom, calculated, so far as is possible, by reference to the assessments to income tax for the year* 1883–'84.

Description.	Income.	No. of years' purchase.	Capital value.
Farming stock and implements of husbandry	.....	.....	$1,459,950,000
Funded and unfunded debt, metropolitan and municipal stocks, excluding those portions held for public or charitable purposes (partly estimated)	.....	.....	3,696,462,064
Indian, colonial, and foreign Government funds	$99,203,602	25	2,480,090,050
Mines (one-half)	17,188,478	7	120,319,346
Iron-works	14,653,031	4	58,612,124
Gas-works	22,743,653	20	474,873,060
Water-works (four-fifths)	11,713,665	20	234,273,300
Canals, &c. (one-half)	8,185,453	20	163,709,060
Public companies (other than companies carrying on concerns specifically described)	165,144,677	15	2,477,170,145
Foreign and colonial securities	47,039,589	15	705,593,835
Railways in United Kingdom	160,852,424	25	4,021,310,600
Railways out of United Kingdom	18,385,637	20	367,712,740
Mortgages and other loans on the security of the rates	24,424,963	25	610,624,075
Other profits	6,355,649	20	127,112,980
Trades and professions (one-fifth of total income of 180 millions, sterling)	175,194,000	15	2,627,910,000
Total under income tax	.....	.....	19,625,723,319
Income of non-income-tax paying classes derived from capital	291,990,000	5	1,459,950,000
Foreign investments not in Schedule C or D	145,995,000	10	1,459,950,000
Movable property not yielding income, *e. g.*, furniture of houses, works of art, &c	.....	.....	4,896,500,000
Total value of personal property in the United Kingdom	.....	.....	27,412,123,319

TABLE C.—*Return of Imperial taxation exclusively borne by real and by realized personal property, respectively.*

Amount of taxes exclusively borne by real property.			
Income tax, at the rate of 5*d.* (10 cents) in the £, or a little over 2 per cent.	.....	$18,539,160	Duty charged 1882–'84.
Probate and legacy duty (portion of)	$4,136,525	.....	Based on actual receipts for 1882–'84.
Succession duty (portion of)	3,309,220	.....	
Total death duties	.....	7,445,745	
Land tax (Great Britain)	.....	5,161,040	
Inhabited house duty (Great Britain)	.....	9,934,380	Duty charged 1883–'84.
Total taxation 1883–'84	.....	41,080,325	
Amount of taxes exclusively borne by realized personal property.			
Income tax, at the rate of 5*d.* (10 cents) in the £ or a little over 2 per cent.	.....	18,722,355	Duty charged 1882–'84.
Probate and legacy duty (portion of)	27,782,848	.....	Based on actual receipts for 1882–'84.
Succession duty (portion)	778,640	.....	
Total death duties	.....	28,561,488	
Total taxation 1883–'84	.....	47,283,843	

SCOTLAND.

Report of Consul Wood.

The manufactures of jute are, as is well known, the chief industry of this consular district. Nearly two-thirds of the whole production find a market in the United States. Next in present importance are the manufactures from flax and of a combination of jute and flax, the fabrics of which are largely classed as linens. In the town of Dundee there are only two or three of the large number of mills that produce flax goods, these manufactures being carried on in the outlying towns of Forfarshire and in Fifeshire south of the Tay. In the trade with the United States from this district these two manufactures make about 97 per cent. of the whole exportations to the United States, the ratio being 63 per cent. of jute goods and 34 per cent. of linen goods for the year ended September 30, 1886. These are about the average percentages for several years past, though there was a noticeable increase in linens in this year. In addition a small trade is done in herrings, potatoes, seal-leather, seal-skins, and in a few other miscellaneous articles, but in all amounting only to about 3 per cent. of the general trade with the United States. Of the whole production of jute goods the United States take about 60 per cent., the remainder finding a market in England, South America, and British colonies.

To the exportations made directly from Dundee should be added those from the consular agency at Aberdeen, which amounted for the year ended September 30, 1886, to $290,841.74 in declared value. Of this amount 54 per cent. in value was for exportations of polished granite, 24 per cent. of linens, 14 per cent. of woolen goods, and the remaining 8 per cent. of miscellaneous articles, such as paper, herrings, machinery, and potatoes.

As a means of comparison for a considerable period the following table shows the declared value of the exports from this consular district to the United States for the several years named:

Years.	Value.	Years.	Value.
1877	$4,670,594	1882	$7,604,358
1878	4,524,756	1883	7,674,074
1879	4,977,319	1884	7,432,670
1880	7,960,109	1885	6,126,436
1881	7,188,818	1886	6,567,782

The foregoing table shows that during the year 1886 there was an increase over the year 1885 of $441,306 in declared values of exports to the United States, or of about 7 per cent. But in linens there was an increased value of $521,971.89 over that of the preceding year, or 32 per cent. In the values of jute goods, however, there was a slight decrease of seven-tenths of 1 per cent. or $24,200.17. The actual quantity of these goods was greater than in 1885, and the decrease in values was owing to the low prices that prevailed during the most of the year. In nearly all the miscellaneous articles there was an increase in 1886, but notably in potatoes of $34,000, and in paper of $3,200.

THE JUTE TRADE.

In the report from this consulate for 1885 reference was made to the low prices of the leading jute goods, as burlaps, baggings, and sackings, and the causes of this condition, as well as of the depression in general trade, were explained. As to the trade with the United States, how-

ever, it is to be said that the depression related to prices only; the quantity of goods shipped was not diminished. In consequence of the production of the same goods in India, the market was no doubt for a time oversupplied, especially in coarser grades; yet shipments continued in their ordinary volume to the United States. The prices of standard burlaps, 40 inches wide and weighing 10½ ounces, were stated in the report adverted to to range from 1 7/12 pence to 1 15/24 pence per yard, but during 1886 these prices were further reduced to 1 5/12 and 1 7/12, at which they remained until about September last, since which some little rise has taken place. A difference of one-twelfth in these prices is about 4 to 5 per cent. as nearly as may be. It is doubtful that any money was made at these low prices. It is known indeed that some mills have been obliged to write off losses of considerable amounts. With the prices for these goods existing during the latter part of 1886, it is probable that some profit is making, especially by the best-fitted mills. These prices may be stated at from 1 7/12 to 1 15/24 pence per yard for the standard burlap of 40 inches and 10½ ounces in weight. They are based on the condition of trade in the United States, and are said to give encouragement to the manufacturers here.

At the close of 1886 the prices of burlaps were as set forth in the following table:

Weight.	Price in pence.	Weight.	Price in pence.
7½ ounces	1 3/8 to 1 3/8	10 ounces	1 11/16 to 1 11/16
8 ounces	1 7/16 to 1 7/16	10½ ounces	1 11/16 to 1 11/16
8½ ounces	1 7/16 to 1 7/16	11 ounces	1 11/16 to 1 11/16
9 ounces	1 7/16 to 1 7/16	11½ ounces	1 11/16 to 1 11/16
9½ ounces	1 11/16 to 1 11/16	12 ounces	1 11/16 to 1 11/16

The prices of raw jute for the year 1886 and for 1885 are set forth in the following table:

Quality.	Price per ton.	
	1885.	1886.
	£ s. £	£ s. £ s.
Fine	13 10 to 16	13 0 to 15 10
Good medium	11 0 to 12	11 10 to 12 10
Medium	10 0 to 11	10 10 to 11 10
Good common	9 0 to 10	9 0 to 10 0
Rejections and commons	7 0 to 8	8 0 to 8 10

In connection with the general manufacture of jute fabrics in the United Kingdom the statistics of the following tables are of some interest:

The following table shows the total exportations of jute yarns for the years named, and the countries to which exported:

To—	1884.	1885.	1886.
	Pounds.	*Pounds.*	*Pounds.*
Germany	1, 980, 969	2, 831, 041	1, 501, 320
Holland	1, 875, 840	2, 224, 560	1, 135, 200
Spain and Canaries	10, 697, 400	8, 393, 760	7, 686, 600
United States	9, 616, 680	12, 714, 120	18, 096, 720
Other countries	1, 083, 480	3, 015, 960	3, 141, 680
Total	25, 254, 360	29, 179, 441	31, 951, 525
Declared value	£311, 552	£266, 734	£280, 076

The exportations of jute bags and sacks are shown in the following table:

To—	1884.	1885.	1886.
	Dozens.	*Dozens.*	*Dozens.*
Australia	202, 537	119, 690	181, 696
Germany	861, 878	555, 705	434, 837
Russia	581, 838	714, 873	742, 796
United States	296, 847	207, 354	258, 995
Other countries	2, 283, 980	1, 865, 785	2, 074, 909
Total	4, 227, 080	3, 462, 907	3, 693, 343
Declared value	£1, 038, 079	£761, 550	£670, 094

It will be observed from these tables how rapidly and to what an extent the exportation of jute yarns has increased. In 1886 the quantity exported hence to the United States was very nearly twice what it was in 1884, and nearly 50 per cent. more than it was in 1885. These yarns are largely used in carpet manufactures, and in a certain degree the increase measures the increased manufacture of these articles in the United States. In the United States very little jute-yarn spinning is done. The difference in wages between Dundee and the United States is more than enough to outweigh the cost of the yarns with the duty added. The wages of spinners here are about 9 shillings, say $2.25, a week. In the United States the wages are about $6 a week. It was at this rate that a company of spinners were engaged here in 1886 for work in the jute-mills at Oakland, Cal.

It is to be observed also that the exportation of bags and sacks has not materially changed for several years past. In 1884 the exportation amounted to 296,847 dozens. In 1885 it fell to 207,354 dozens, but in 1886 there was a slight rise to 258,995 dozens. Until about six years ago these bags were a very large item of export from Dundee, the average being about 1,000,000 dozens a year. The mills of India have, however, now in great part driven the Dundee exporters from the market. It is probable that nine-tenths of the bags used on the Pacific coast are supplied from India, while formerly Dundee had almost a monopoly of this trade.

A fall in prices will also be noticed since 1885 in both jute yarns and bags and sackings. The declared value on over 25,000,000 pounds of yarns in 1884 was £311,552; in 1885 on over 29,000,000 pounds the declared value was £266,734, and in 1886 on over 30,000,000 pounds this value was only £280,096. So also in bags and sacks. In 1885 the declared value of over 3,000,000 dozen bags was £761,550. In 1886 this value on about the same quantity was only £670,094.

The condition of the jute trade in Dundee will appear in a measure from the foregoing statistics. The depression in prices that prevailed all through 1885 continued without change for the better until late in 1886. The slight revival that took place in September of that year, and is yet felt, while it has in it some grounds of encouragement, is yet so small as to yield only the scantiest profits if any at all; and it is of so doubtful permanency that prices may at any time return to the former low condition.

There was no stoppage of machinery and no decrease in wages during the year. No failures of great importance, nor strikes, have taken place. In 1885 efforts were made to bring about an agreement for short time or stoppage of machinery; but these efforts failed, although it seemed widely to be believed that such a course would have well

availed the trade. No efforts in this direction have been attempted during 1886. In India, however, the mills went on short time, and have continued so more or less during the year. There seemed a concurrence of opinion that a decrease of production both in Dundee and India would operate towards an increase of prices more quickly and to a more satisfactory degree than in any other manner. But so long as any of the larger mills decline to enter such a compact the plan could not be carried out.

The manufacture of jute in Dundee goes back only about fifty years, and was undertaken in doubt and prosecuted for many years under much discouragement. A great difficulty was found in the ignorance of the proper treatment of the fiber. At first the manufacture was not a separate one, but the jute was combined with flax and tow. In a considerable degree this is still done. Later on the cheapness of the fiber, when its varied utility became known, made it available for coarser cloths, and the manufacture of jute goods unmixed with flax began its development. This has led to the change in machinery, from flax to jute spinning, until only two or three mills in the town are engaged on flax goods. The first great advance came with the Crimean war, and the manufacture was very largely extended during and after the late American war. The rise and progress of the trade seem, in fact, to have depended on, as they were certainly promoted by, the existence of war in some quarter. At such a time jute goods are in the largest demand. Even a rumor of war has a stimulating effect, as was observed during the difficulty with Russia in 1885.

The depression of the trade in Dundee, and still existing, began about the year 1880. It has not been owing to any demand for new or different fabrics that are taking the place of those of jute; the volume and variety of manufactures are quite as good as at any time, and even larger. The causes of the depression are found rather in the erection of mills on the Continent and in India, with consequent overproduction, and in adverse tariffs that have shut out the Dundee goods from their former markets. The exportation of jute goods from India was very small until about the time of the opening of the Suez Canal, and the manufacture there was chiefly of gunny cloths, which were consumed by the native population. Dundee had the markets of Australia, the Cape Colony, Egypt, the Continent, and South America, besides that of the United States. Now there are over 20 mills in India with 8,000 to 10,000 looms, and 200,000 spindles. The United States have been the most important and desirable market for Dundee, and have taken, as they continue to take, over 60 per cent. of the production. But at this time the Indian goods are competing in every class except perhaps in the finest grades.

In the material for grain bags and sackings, in which the Dundee trade was, as has been said, very large, the Indian mills have been able almost to close the United States as a market for the same goods from this district. In the finer classes of manufactures, however, the completeness of machinery and the skill of the workers have enabled Dundee to hold her own, in spite of the long hours and cheaper labor on the Continent, on the one hand, and of the cheap material and labor in India on the other. The growth of the jute manufacture on the Continent is of very recent date, and is to be ascribed to the protective tariffs of the several states. In Austria-Hungary the tariff on jute goods is virtually prohibitory; in Italy it is heavy; in Germany about 27 per cent.; and in Russia about 112 per cent. In each country the effect has been to bar out the Dundee goods, and to enable its manufacturers to assail

the Dundee production in markets that the latter had held exclusively for many years.

The markets for jute goods are chiefly foreign, it being computed that not over 10 per cent. of the production of the United Kingdom is consumed at home. Even this market has been of late seriously invaded from India, particularly in the coarser goods. With the closing of the continental markets, the competition of the trade of the United States has grown even keener than formerly. A monopoly for Dundee no longer exists in these manufactures. The former great and rapidly made fortunes are now no longer possible to be gained, and the changed condition must before long suggest to all concerned, whether employers or employed in this chief industry of the town, the necessity of such combination of effort as will save an adequate share in all available markets for their goods.

Coming now to the statistics of the jute trade, the following table shows the importations of raw jute into this port, both directly from India and otherwise, for the last seven years:

Year.	Total importation.	Direct importation.	Year.	Total importation.	Direct importation.
	Tons.	*Tons.*		*Tons.*	*Tons.*
1880	139, 847	103, 433	1884	180, 151	109, 777
1881	160, 089	147, 622	1885	175, 673	172, 222
1882	168, 786	153, 141	1886	182, 354	168, 027
1883	233, 883	205, 809			

The prominence of Dundee in the manufacture of jute is shown in the following tables of spindles, looms, and persons employed:

Country.	Jute-spinning spindles.				Doubling spindles.			
	1870.	1874.	1878.	1885.	1870.	1874.	1878.	1885.
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Scotland	94, 520	185, 419	183, 056	225, 399	5, 804	7, 658	5, 855	10, 030
Ireland	4, 194	13, 738	5, 858	5, 270	30	338	230	200
England	10, 286	21, 754	23, 762	22, 510	322	1, 278	1, 407	794
Total	109, 000	220, 911	212, 676	253, 179	6, 156	9, 274	7, 492	11, 024

Country.	Looms.				Persons employed.			
	1870.	1874.	1878.	1885.	1870.	1874.	1878.	1885.
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Scotland	3, 744	8, 325	10, 009	10, 856	14, 911	30, 893	30, 401	36, 269
Ireland	108	347	222	282	727	2, 094	923	961
England	478	927	1, 057	995	1, 932	4, 933	4, 961	4, 444
Total	4, 330	9, 599	11, 288	12, 061	17, 570	37, 920	36, 283	41, 674

LINEN TRADE.

The declared value of the exports of linen goods from this district during the year ended September 30, 1886, was $2,112,190.38, as against $1,590,217.49 for 1885. This indicates an increase of 32 per cent. and represents 34 per cent. of the declared value of all goods exported hence to the United States for the year 1886. The manufacture of linen is carried on largely in Fifeshire, though a little is done in Dundee, and much of it is done in Forfarshire, outside of the town. The increase

for the year is noticeable. Prices have, however, been low, and though the volume of business was greater it is not probable that more than a moderately fair profit has been made. The trade is not perhaps in a flourishing condition, but it has not to deal with the low prices of jute goods. Both spinners and manufacturers complain indeed of low prices, and in yarns there has no doubt been serious competition from the Continent. But such complaints must be taken as having a comparative significance only. Good prices are measured by the extremely high prices of exceptional periods—as during the late war in America—in which fortunes were rapidly accumulated. Prices are close, no doubt, and competition with Belfast and German linens keen; but there are few indications, such as failures, the closing of mills, short time, or reduction of wages, that suggest that a fair profit is not received on the capital invested. Men favor or condemn a market according to the sale of their wares, and an increase in orders makes trade good for those that receive them, while those that fail to get them are loud on its dullness and decay. With others the complaint of bad times is rather a habit—a sort of business expectoration that means nothing more than a preface to a talk. With the mills in this district the chief production was formerly of flax goods, but now jute and flax, or jute and cotton are used together to such an extent that comparatively little of pure flax goods are made, although they are sold as linen goods. It is not that less money is made in manufactures of flax, but rather that other fabrics have been in demand in which jute or cotton have in part taken the place of flax.

The following table shows the quantities of flax and tow and codilla imported into this district for the years named:

Year.	Flax.	Tow and codilla.	Year.	Flax.	Tow and codilla.
	Tons.	*Tons.*		*Tons.*	*Tons.*
1882	48,490	12,092	1885	43,171	6,426
1883	35,226	8,685	1886	24,114	6,692
1884	35,174	6,464			

Apart from the statistics of Scotland relating to the flax industry, those which show the condition of spinning and weaving throughout the United Kingdom are of interest. The following tables present the figures:

Country.	Flax-spinning spindles.				Doubling spindles.			
	1870.	1874.	1878.	1885.	1870.	1874.	1878.	1885.
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Scotland	317,085	275,119	265,263	220,644	13,514	15,432	18,495	22,629
Ireland	896,482	906,946	808,695	817,014	20,178	18,616	18,048	19,262
England	269,768	291,735	190,808	117,559	32,520	47,287	28,439	23,269
Total	1,483,335	1,473,800	1,264,766	1,155,217	66,212	81,335	64,982	65,160

Country.	Looms.				Persons employed.			
	1870.	1874.	1878.	1885.	1870.	1874.	1878.	1885.
	No.	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*	*No.*
Scotland	17,419	18,529	16,756	21,626	49,917	45,816	37,476	39,086
Ireland	14,834	17,827	19,611	21,954	55,039	60,316	56,342	61,749
England	3,048	5,624	4,081	4,061	19,816	22,327	14,988	11,002
Total	35,301	41,980	40,468	47,641	124,772	128,459	108,806	111,837

WHALE AND SEAL FISHING.

Dundee is the chief port—almost the sole one—in the United Kingdom, from which the whale and seal fishing is now carried on. It has held this position for many years, and the industry was for a long period successfully followed. A ready market is found in Dundee for the oil, which is largely used in the manufacture of jute. For some years past, however, the results of the fishery have been very unsatisfactory, and it is doubtful that in 1886 even the expenses were paid.

The ships, all of which are steamers, leave Dundee about the 1st of March for the seal fishing, returning so as to be ready to leave again for the whale fishing about June 1. The seal fishing is prosecuted in Labrador mainly, and the whale fishing in Davis Straits. This year, however, one vessel visited Fox's Channel, but with small success, two whales only having been taken. Four ships—the Jan Mayen, the Star, the Triune, and the Resolute—were lost.

There are given below some tables that show concisely the particulars of this industry for a series of years:

Year.	Seal fishing.			Whale fishing.		
	Ships.	Seals caught.	Oil.	Ships.	Oil.	Bone.
	No.	*No.*	*Tons.*	*No.*	*Tons.*	*Tons.*
1876	12	57,770	625	12	824	.....
1877	13	76,000	1,092	13	955	.....
1878	12	77,411	1,106	13	114	.....
1879	15	90,710	1,168	13	729	.....
1880	13	88,040	1,215	12	1,077	.....
1881	15	152,700	1,998	11	514	.....
1882	10	81,123	967	12	780	28
1883	13	113,353	1,460	8	628	9½
1884	19	51,294	711	9	953	.....
1885	11	84,140	1,100	16	411	10
1886	9	49,810	635	11	412	12

Values of whale and seal fishery.

Year.	Articles.	Unit.	Prices per unit.	Total values.
			£ s. d.	
1881	Whalebone	Per ton	720 0 0	£17,820
	Whale-oil	do	33 0 0	16,962
	Seal-oil	do	29 0 0	57,942
	Seal-skins	Each	5 0	38,176
	Total			130,900
1882	Whalebone	Per ton	1,150 0 0	32,200
	Whale-oil	do	33 0 0	28,710
	Seal-oil	do	30 0 0	29,010
	Seal-skins	Each	5 0	20,280
	Total			110,200
1883	Whalebone	Per ton	1,750 0 0	16,625
	Whale-oil	do	35 0 0	18,340
	Seal-oil	do	31 0 0	45,260
	Seal-skins	Each	5 0	28,338
	Total			108,563
1885	Whalebone	Per ton	1,500 0 0	15,000
	Whale-oil	do	23 0 0	7,898
	Seal-oil	do	20 0 0	23,040
	Seal-skins	Each	3 6	14,729
	Total			60,667
1886	Whalebone	Per ton	2,250 0 0	28,912
	Whale oil	do	23 0 0	10,384
	Seal-oil	do	21 0 0	13,325
	Seal-skins	Each	6 0	12,564
	Total			65,195

The foregoing tables show the annual values of both whale and seal fishing. The catch for 1885 and 1886 was small, and is said not to have been remunerative. For 1886 the price of whale-oil was £23 per ton; of whalebone £2,250 per ton; of seal-oil £21 per ton, and of seal-skins 6*s.* each. The total values were £65,195, and for 1885 £60,667. The average values for the years 1880, 1881, 1882, and 1883 were £116,213, showing a decrease for 1885 of between 45 and 50 per cent., and the same decrease for 1886.

The catch of the whale fishery in 1886 was 15 black whales, 1,040 white whales, 19 bottle-nose, and 27 nar whales, besides a small number of walrus. The average price of whale-oil for six years ended with 1886 was £29 per ton; of whalebone £1,390 per ton; of seal-oil £26 per ton, and of seal-skins, 4*s.* 9*d.* each.

A. B. WOOD,
Consul.

UNITED STATES CONSULATE,
Dundee, December 17, 1886.

THE GREENOCK SUGAR TRADE IN 1886.

[From the Greenock Telegraph, Thursday, December 23, 1886.]

(*Transmitted by Consul Underwood, of Glasgow.*)

It is customary at the closing of the year to review the commercial past and anticipate the future. This is necessary, as our social life reposes on an industrial basis, and takes its coloring from the trade conditions of the time. For some years back the commercial life of the country has been ebbing rather than flowing; and Greenock, whose energies find an outlet in but one or two staple industries, has suffered much. If there is any improvement in the situation it lies in an increased feeling of hopefulness rather than in any yet realized betterness. Iron values, traffic returns, and other indications, however, would suggest that we have at last reached the exhaustive stages of the depression, and that industry is about to resume its wonted activity. This is strengthened by the consideration that the wants of the world are increasing rather than diminishing; that capital is plentiful and labor redundant, and the over-accumulated stocks of commodities which have brought about an unhinging of markets must now be considerably reduced.

THE SUGAR TRADE.

How does it fare with this staple and important industry; what has been its course during the year about to expire; and what are its prospects for the future? It must be admitted that the Greenock sugar trade in 1886 has not been satisfactory; that at present a considerable cloud hangs over it, and that its immediate prospects are not particularly hopeful. This is partially due to the general industrial depression, and also to other causes specially affecting itself which will fail to be noticed. It will be remembered that two years ago the sugar market was suffering from an abnormal depression, prices at that time being unprecedentedly low. This had been brought about by the enormous and altogether unexpected quantities of beet-root sugar which were thrown on the market. This disturbing factor had first manifested itself in the closing months of 1883, and continued to assert itself with accelerated strength until the December of 1884, when prices reached an astonishingly low point. At that time beet-root sugar, which in 1876 brought 29*s.* 9*d.*, was selling at 9*s.* 9*d.*; medium Javas, which in the same year realized 35*s.*, could be had for 13*s.* 9*d.*, and good brown West India sugar was placed in the market at the abnormally low price of 11*s.* per cwt. It is true that the high values realized in 1876 were somewhat inflated, but the rebound to the extremely low quotations in December, 1884, was such as no one could have anticipated. The opening months of 1885 brought some relief; this was specially true of the first half of that year, as in July a recovery was shown of almost 50 per cent. Thereafter prices indicated a backward tendency, and this feature continued to manifest itself until the end of the year. The year 1885 was, however, as a whole, regarded as fairly remunerative to the sugar-refining trade in Greenock, and its successor opened not altogether without a feeling of hopefulness.

THE GENERAL COURSE OF THE TRADE IN 1886.

As already remarked, the year just about to close has not been satisfactory to the Greenock sugar trade. Low prices, fluctuating markets, and a general feeling of uncertainty have made themselves disagreeably felt. A condition of paralysis attended the operations of the importer, and the refiner was puzzled as he had never been before as to the purchasing of his raw material. In former years it had been possible to somewhat approximate the course of the market, and this enabled the refiners to lay in considerable stock of the raw article. The unrest, however, manifested in the sugar values of the present year rendered this impossible, and, for the first time in the history of the trade, refiners, acting from prudential motives, have, as a rule, had to content themselves with hand-to-mouth supplies. A policy of this kind has its advantages, but it tends to the creation of difficulties in another direction. The value of the raw material and that of the refined article should bear a certain relation to each other; and the refiner can protect himself from a sudden downward tendency in the price of his finished product by carefully restricting his purchase of raw sugar. This, however, when carried to an extreme point, must tend to bring about decreased stocks of the raw material both here and in the United Kingdom, and this enables holders of sugar abroad to raise the price of the article. And, in point of fact, the stocks of raw sugar in the United Kingdom are at present lower by 50,000 tons than at the corresponding period of last year. The decrease is in reality much larger when we consider that each of the past successive four years showed an increase as compared with its successor as regards stocks of the raw material. The course of the sugar market is now to be traced in the varying prices of beet-root, which enters into the composition of the refined article to the extent of nearly two-thirds of the whole. And this beet-root is now produced in larger and still increasing quantities, with the result that it controls the market and dominates sugar values of whatever kind. On the whole, sugar prices have ranged lower during the course of 1886 than during any previous year. When the year opened beet-root (f. o. b.) was quoted at 15*s.* 6*d.*, but towards the end of January it had dropped to 14*s.* In April the market showed an upward tendency which resulted in an advance of 1*s.* 6*d.*, but this was checked by the reports of the coming heavy beet-root crops. This caused a steady relapse in prices, which continued until the autumn months of the year, when a slight improvement manifested itself. The average price of beet-root in January was 14*s.* 6*d.*, and that for December is 11*s.* The lowest monthly average price of beet-root during the year was 10*s.* 6*d.* (in June). It was, however, quoted during that month at a still lower figure, when it was to be had from 10*s.* 1½*d.* to 10*s.* 3*d.* This closely approaches the price of beet-root in December, 1884, when it had gone down to 9*s.* 9*d.* In August of this year Java sugar, No. 14, D. S., was sold at 12*s.* 9*d.*, being 1*s.* less than the very low price in December, 1884. There is at present but little prospect of increased sugar values, as according to the best authorities the estimated returns from this season's beet-root crop show an excess of about 500,000 tons over those of last year. The yield of this sugar will be the very largest on record.

SUGAR VALUES, STOCKS, AND IMPORTS IN 1886.

To enable our readers the more readily to understand the present condition and prospects of the sugar trade, not only generally, but with special reference to Greenock, we append a series of tables. These tables are compiled from reliable data, and show the comparative values of imports and exports for the last five years. Corresponding information is also given as to the course of the sugar trade in 1875, which enables a comparison to be made between the volume and values of the trade in 1886 and those of eleven years ago.

Table I, dealing with the imports of raw sugar into the United Kingdom, shows a large decrease as compared with those of the past four years. The average import of the years 1882, 1883, 1884, and 1885 was 976,250 tons, whereas the quantity for the present year is only 835,000 tons, thus showing a falling away of 141,250 tons. The deficiency of imports has caused a reduction in stocks in the United Kingdom, these now being represented by upwards of 50,000 tons less than at the corresponding periods in 1882, 1883, 1884, and 1885. This is altogether unusual, as at this period each of the successive years just mentioned (1884 excepted) showed an increase in stocks as compared with those of its immediate predecessor. The imports of 1886 as compared with those of 1885 show a falling off in beet-root to the extent of 60,000 tons; 35,000 tons less have been received from the British West Indies, 35,000 tons less from Brazil, and 30,000 tons less from the Spanish West Indies. This last-named place, it may be stated, was once and for long the main source of our sugar supplies, but it has now become comparatively unimportant as a contributing source to the United Kingdom. These Spanish-produced sugars now find their way to the United States markets. From Java, however, there has been an increase of about 25,000 tons.

Table II, dealing with the imports of raw sugar into Greenock, shows largely reduced imports. Of the decreased imports of raw sugar into the United Kingdom, represented by 135,000 tons, the largest proportion of reduction has taken place in Greenock. At present the stock in Greenock is 30,000 tons short of what it was at the close of 1885. A knowledge of this must tend to stiffen the demands of raw sugar sellers to Greenock refiners.

Table III deals with the total amount of raw sugar refined in Greenock. The outturn from the Greenock sugar refineries in 1886 is a little less than that of the preceding five years. As compared with 1885, it shows a reduction of 5,500 tons; with 1884, 2,500 tons; with 1883, 7,500 tons; and with 1882, 2,500 tons. It is thus seen that, as compared with the past five years, the Greenock refining trade has receded rather than progressed. The difference is slight, but it is altogether in the wrong direction. To say the very least, these figures show that in Greenock the trade is stationary. If we go back a year further to 1881, we find that the output of refined sugar in Greenock was represented by 20,000 tons more than in the present year. In fine, the Greenock refining trade has been practically stationary since 1875. Eleven years ago the outturn was 243,000 tons, while in 1886 it has been 237,500 tons. The present year thus shows a falling away of 5,500 tons as compared with 1875. The outturn of sugar from our refineries has been rather irregular and somewhat fitful during the year. A considerable spurt, however, manifested itself from July to October, and it is probable that during that time a larger quantity was refined in Greenock than in any similar period. Less beet-root has entered into the composition of Greenock refined sugar than in 1885. In that year the proportion was almost two-thirds, but during the year about to elapse it is nearer one-half.

Tables IV, V, VI, and VII deal with the prices of raw and refined sugars. They give the average monthly values of Java, beet-root, good brown West India, and medium refined sugars. On the whole, sugar prices have ranged lower in 1886 than during any previous year. It will be seen that Java sugar, No. 14, D. S., realized its highest price in December, 1875 (34*s.* 6*d.*), while its lowest point has been reached in August, 1886, when it was quoted 12*s.* 9*d.* The average price for January of this year was 16*s.* 6*d.*, and that for the present month is 13*s.* 9*d.* It will be observed that beet-root was at its highest price in December, 1876 (29*s.* 9*d.*), and at its lowest in December, 1884 (9*s.* 9*d.*), a little less than the average price for the December of the present year. In the opening month of the present year it stood at 15*s.* 6*d.* In January the average price of good brown British West India sugar was 14*s.*, and in the present December it stands at 11*s.* 3*d.* As regards medium refined sugar, the average monthly price in January of the present year was 17*s.*, and at present it stands at 14*s.* 9*d.*

Table VIII may, as regards information, be considered in present circumstances the most important of all. It records the imports of foreign refined sugars into the United Kingdom. A glance at this table shows that the foreign refiner is making year by year steady and substantial encroaches on the British sugar market. In 1875—eleven years ago—the total annual consumption of foreign refined sugar in the United Kingdom was represented by something less than 100,000 tons. In 1882 it stood at 128,000 tons, and each successive year since then has shown considerable advances. As compared with 1882 the year 1883 shows an excess of 30,000 tons; 1884, an excess of 72,000 tons; 1885, an excess of 122,000 tons; and the present year the still larger excess of 197,000, or about equal to 200,000 tons. That is to say, that since 1875, and within eleven years, the foreign refiner has increased his sale of sugars to British consumers by 225,000 tons. The imports of foreign refined sugar into the United Kingdom in 1886 is represented by the very large quantity of 325,000 tons. This is 87,500 tons in excess of what was turned out from the Greenock refineries in the present year. The import of foreign refined thus goes on increasing year by year with large strides. In 1875 the ratio of foreign refined to total home consumption was as one to eight, as against one to three in 1886. Although the quantity of foreign refined steadily increases, the quantities from the various sources are exceedingly variable. From Germany alone has the increase been steadily progressive; the United States, which in 1885 sent such an alarming quantity, has this year supplied us with 30,000 tons less. In the earlier months of the year the large imports came from Russia, and during the closing months of 1886 France has flooded the country with her refined sugars. No doubt a large quantity of sugar imported under the name of refined is bought by British refiners—how much we have no means of knowing; but this fact is not unimportant in considering these figures.

THE GREENOCK SUGAR TRADE AND LOCAL REVENUES.

Table IX deals with the direct annual contributions of the sugar trade to local revenues. And there can be no better method of bringing home to the mind of the community the importance of the sugar trade to Greenock and its vital bearing on the development and prosperity of the town. The total direct contributions of the sugar

trade in 1886 to the harbor trust are £33,000, which is equal to 54 per cent. of the entire harbor trust revenue. This represents dues on sugar and on sugar-laden vessels discharged at Greenock, rent on harbor trust sheds and warehouses, dues on sugar shipped at Greenock, and on sugar-carrying vessels entering the graving docks for repairs. The sugar contributions to the water trust in the year 1885-'86 are represented by £7,824 16*s.* 7*d.*, an amount equal to 33.7 per cent. of the entire water trust revenue. To the poor and education assessments the sugar trade contributes £1,537 10*s.* 8*d.*, equal to 7.6 per cent. of the whole. The police and other assessments draw from the sugar trade the sum of £1,785 13*s.*, equal to 5.4 per cent. of that entire revenue. Finally, in summarizing the results, we find that of the entire ordinary local revenues, amounting to £136,906 14*s.* 6*d.*, the sugar trade furnishes £44,148 3*d.*, a sum equal to 32.5 per cent. of the whole. It will be observed from the table dealing with this matter that the sugar contribution to the harbor trust revenues is this year less by about £3,000 than it was in 1885. This is to be accounted for by the general depression in the sugar trade, and notably to the falling off in direct sea-borne imports at Greenock. This was apparent in the unusual slackness that prevailed around the harbors during the present year. It is estimated that the raw sugar discharged at the quays, as compared with the figures in 1885, is less by about 45,000 tons. Large quantities of beet-root find their way into Greenock per rail, but it is difficult to get at the figures. This sugar, unfortunately for the harbor trust revenue, escapes the dues levied on direct sea-borne cargoes.

THE CONDITION AND PROSPECTS OF GREENOCK SUGAR REFINING.

Until within the last few years, so deeply marked by industrial and commercial depression, Greenock was favored with an extraordinary share of material development and prosperity. And in this the sugar trade was a prominent sharer. The trade until recently was fairly remunerative to those engaged, but it has failed to manifest that elasticity and march forward so characteristic of ship-building and other industrial departments. The test question as to the condition of our sugar industry is not how much sugar is refined in Greenock, but what proportion does our annual production bear to the total yearly consumption in the United Kingdom and the exports therefrom. Eleven years ago Greenock supplied 28 per cent. of the sugar then consumed, whereas in 1886 the portion is slightly under 25 per cent. It is no comfort to tell us we send out as much sugar as we did in 1875; our turn-out should have grown with the growth of the population, the increased individual consumption, and the consequent enlarged demand. The population of the United Kingdom has increased enormously since 1875, and the consumption per head is greater than in any other country in the world. It stands somewhere a little over 70 pounds. But notwithstanding these reasons for expecting a large development in our sugar-refining industry, it has for the past eleven years remained practically stationary. The reasons for this arrestment are worth inquiring into. They are not to be found in disadvantages and inconveniences attending our situation as a great refining center. Greenock as a seaport is admirably situated; her docks and harbors are abreast of the times; her quayage dues bear in point of moderation favorable comparison with those of other sugar ports; and water, which is an essential factor in sugar refining, is excellent, cheap, and abundant. The causes responsible for arresting the progress of the Greenock sugar industry must either be found in the incapacity or unwillingness of our refiners to adjust themselves to the wants of a time that is nothing if not transitionary, or in the operation of extraneous influences over which they have no control and with which they are powerless to battle.

THE VEXED QUESTION OF FOREIGN SUGAR BOUNTIES.

For many years now this question has assumed a prominence as a disturbing and repressing factor in the development of our sugar trade, but at present it appears to be more accentuated than at any previous time. Our refiners assure us that but for the subsidies of French Governments to their refiners, they could not only hold their own in the trade, but command, to the exclusion of the foreigner, the sugar consumption in the United Kingdom. There is no doubt that our sugar industry is suffering from foreign competition, and that that competition is encouraged by the pernicious system of bounties. But to what extent this is the case it is impossible to determine. The fact is that no direct bounty is given to the foreign sugar refiner; it is given in the shape of a drawback, and, as stated in our sugar article of last year, the methods of its operation are such that the actual and exact results cannot be ascertained. The duty is paid on the raw beet-root as it leaves the field and enters the fabriques. The assessment is levied on the roots, and in calculating the duty on home consumption the Government estimates that a certain weight of beet-root will yield a certain proportion of saccharine matter. In France, for example,

it is estimated that the yield will be 6 per cent, but it is stated that the average extraction of saccharine runs from 10 to 12 per cent. The actual percentage of the yield must depend on many causes. It will be influenced by the weather and general climatic influences, the richness or leanness of the roots, and in a very special degree by the extracting appliances of the fabriques. The commercial appliances are, we understand, excellent, and it is easy to see how the fabricants will be stimulated to perfect their extracting methods, when so much depends on them. It is admitted by the French Government that by the circuitous method of assessment a large proportion of the sugar escapes the duty. The chancellor of their exchequer stated recently that at least 4 per cent. in excess of the Government estimate was extracted from the roots. In exporting sugar it is assumed by the French refiner that the whole has paid the Government duty, and on this false assumption the drawback is calculated and paid in full. The net result is that the French refiner receives from his own exchequer more money than he has paid into it in the form of duty, and to whatever extent this may be the case he is subsidized by his Government, and strengthened to compete favorably with our refiners. The French manipulation of their sugar duties, though resulting in a considerable bounty, yet in principle and method may be taken as a fair representation of the whole continental system. By refining in bond the bounty system would disappear.

WHO ARE OUR PRINCIPAL FOREIGN COMPETITORS.

The foreign refined sugars entering our home market come from France, Russia, Germany, Austria, Belgium, Holland, and the United States. Our housewives have in addition to our home-refined supplies all these sources to draw from. British grocers now sell in large and increasing quantities French and Russian crystals, German granulated, Austrian crushed, and Dutch lumps. The United States bounty has been almost entirely cut off, and to this cause is attributed the almost entire cessation of refined sugar from this quarter during the last month or two. On the other hand, the French bounty has been greatly increased, and this is associated with the large and daily increasing imports from this source. To whatever cause it is to be correctly attributed, it must be a serious matter for our refiners to find that of the British consumption of sugar no less a quantity than 325,000 tons (less the weight bought and used by our refiners themselves) this year were supplied from foreign sources, and the proportion is rapidly growing from year to year. The French bounty is estimated at from 5 shillings to 10 shillings, and the German at 2 shillings per cwt. This, of course, is merely approximate, it being impossible to ascertain the exact amount. It has been estimated that during the current fiscal year in France their refiners will receive on their total exports of refined sugar a sum of two and a half millions, but it is impossible to calculate the amount until it is seen to what extent their sugar finds its way into this and other countries. There can be no doubt that the British consumer receives a considerable benefit from the cheapness of the article brought about by the keen foreign competition, but to what extent this is the case, it is difficult to say. Let us suppose that the French refiners pocket the sum of two and a half millions on their exports to the United Kingdom and other countries. How much of this do they require to part with in order to successfully compete with our home refiners, and how much are they able to retain for themselves, or are they even obliged to part with any of it at all? The whole question is veiled with the impenetrable, some asserting that only a veritable fraction of the bounty requires to be spent, while others maintain that the whole sum is retained by the foreign refiners, and that even if the bounty were withdrawn to-morrow they would continue to send their sugar into our markets as they do at present. The general opinion is, however, that the British consumer benefits to some extent by the bounty, and that if it were withdrawn the foreign imports would sensibly decrease if not cease. It must not, however, be forgotten that the raw beet-root is bounty-fed as well as the refined, and that whatever cheapening of the raw results from this is shared by our home refiners. When it is remembered that beet-root to the extent of almost two-thirds enters into the composition of our home refined sugar, it is easily seen that there is a large compensation to our refiners in this bounty business. In addition, it is admitted that the cheapening influence of the bounties has been the means of very largely developing the British confectionery industry.

THE DUTY OF THE BRITISH GOVERNMENT IN REFERENCE TO BOUNTIES.

It is clear that the system of foreign sugar bounties constitutes a direct and grave violation of free-trade principles, and that it is the bounden duty of our Government to use every legitimate means to bring about its suppression. We cannot by force direct the lines in which other nations should trade with us, but we can exhaust the weapons of a moral and enlightened diplomacy to induce them to tread in just and

righteous paths. And in requesting foreign nations to discard subsidies and hot-house methods of industry we do so with clean hands. Great Britain has opened her ports to the world; she receives freely whatever the industry of others has to offer, and she stands forth as the great pioneer of free trade among the nations of the earth. Assuming that a large portion of the sums represented by foreign bounties is spent in cheapening the price of sugar to the British consumer, there are those who think that we should accept the situation without demur, and congratulate ourselves on the liberality of foreign Governments. From a pure free-trade point of view this is perhaps strictly logical, but it is accompanied with a doubtful development. It is unfair that the peoples of the Continent should be needlessly mulcted in order to enrich their own sugar refiners and to effect a cheapening of sugar to British consumers. And it is also unfair to our own refiners, whose capital is at stake, and to the vast labor interests represented in our sugar-refining centers. These sugar centers are unfortunately few, and this it is that has prevented the question of foreign bounties from assuming the importance of a national grievance. The world is governed mainly by motives of self-interest, and our only hope of being able to suppress the bounties lies in our power of convincing the foreigner that he continues to grant them to his own detriment. Our American cousins have already caught a glimmering of this truth, and this has found practical expression in the cutting down of their sugar bounties, and in their pledge that what has been accomplished in part will shortly be fulfilled in whole. What in this respect has been made patent to the American should not be impossible to the Continental intellect, and whatever our own Government can do towards the solution of this problem should be wisely, resolutely, and immediately done.

THE WEAKNESS OF A SEVERELY LOGICAL FREE TRADE.

For good or evil the competitive system is now the law of our industrial and commercial life, and it becomes more feverish and accentuated with every passing year. The stern law of the survival of the fittest is now operative in full and unrestricted force, and if with benefit to the many, with cruel consequences to the few. We have entered on an industrial era that is pregnant with harassment, uncertainty, and disturbance. No producer or manufacturer now knows exactly where he stands. The inventive brain and the cunning hand are everywhere and always aiming at improvements, with the result that the splendidly and skillfully organized industry of to-day may be withered and paralyzed by the ingenious discovery of the morrow. This we call progress, but it means a transitional state which gives birth to much dislocation and suffering. If superior skill and local natural advantages enable a particular country to outstrip all its rivals in the production of a commodity, both as regards cheapness and excellence, it is doubtless a world benefit. But it also means silent factories and displaced operatives in other industrial centers, with the consequent suffering that is inseparable from idle labor. This, when springing directly from the natural operation of free trade, we must submit to, and adjust ourselves to the new circumstances as best we may. But when an industry whose prosperity is vital to the existence of a community is threatened by the pernicious and artificial stimulus of foreign subsidies, the matter is far otherwise, and demands the most serious consideration. Take Greenock, for example, and assume that the present seemingly decaying condition of the sugar industry is due to the operation of foreign bounties. Let us even assume the worst by supposing that the Greenock sugar trade is doomed to perish. This to a large extent would spell ruin to the town. It would afford little comfort to be reminded that the people of Greenock, in common with other citizens throughout the country, had the advantage of cheap sugar. The cheapness of a commodity is good, but in this case it would be brought about by a great deal of suffering. If the division of labor is a strength, it is also a weakness. In these days the individual is trained to a particular trade, and if employment fails at that he is doomed to complete or semi starvation. If displaced capital and displaced labor could find immediate employment in fresh industries it would be well. But this is not the case; and an extinguished industry, whether brought about by the operation of natural causes or by the hot-house method of foreign subsidies, is to many attended with calamitous results. This is the crucial weakness in the development of free trade, but it is easier to point out the evil than to devise a remedy.

WHO HAS ENCOURAGED THE FOREIGNER TO CONTINUE THE BOUNTIES?

It must be confessed that hitherto the diplomatic action of successive British Governments, combined with the loud protests of the home refiners that their trade was about to be ruined, has, with the continental Governments, had the effect of encouraging rather than discouraging the system of bounties. The bounty system is not a new one, though of late it seems to have become aggravated. For years a number of agitators, whose business it was to hold meetings and petition the Government on this

question, were said to have been maintained at the expense of the refiners. In Greenock, Liverpool, London, and elsewhere the McLeans, the Peters, and the Kellys raised a clamor that a crisis had arisen in the British sugar-refining trade, and that it was about to be extinguished through the operation of foreign bounties. What was this but to encourage the foreign refiners in the belief that they were about to possess a monopoly of the British sugar market, and to strengthen their respective Governments in the idea that, though in principle bounties were penicious, it was worth their while to continue them a little longer, when such a prize was in store? And this agitation was carried on at a time when bounties were admittedly much less than they are to-day. The continental ear is ever open to what is going on in this country, and nothing better could have served their purpose. Our home refiners have not acted wisely in crying fire when there was no fire; their policy was ill-adapted to the end they had in view; and the unfortunate results are easily read in the recent increasing of the French bounties. It is a ruinous policy for the representatives of a trade to go about proclaiming that it is on the verge of ruin. Such a course not only tends to impair their credit with those who deal with them, but it places them at a disadvantage in the withdrawal of trade facilities, such as the lessening of raw stocks at their own door. The result has been prejudicial both to the interests of the sugar trade and the town generally. Greenock can compete favorably with London and other sugar refining centers, and if left alone by the sinister and Cassandra prophets would to-day be in a healthier condition.

WHAT ABOUT A COUNTERVAILING DUTY?

This much-vaunted and much-bepraised remedy has not of late been quite so audible. It is, however, coming to the front once more. The increasing keenness of the foreign competition and the recent addition to the French sugar subsidies have rejuvenated our countervailing friend and again brought him out into the open. The would-be countervailers, for the most part, proclaim themselves free-traders, and contend that their ideas, if embodied in legislation, would do nothing to promote protection, but would simply restore the natural equilibrium which the foreign bounties have destroyed. Even assuming the soundness of their contentions, there are serious initial difficulties which cannot be surmounted. It is admitted that in amount the bounties vary in each respective country, and that there is no possibility of ascertaining exactly what they are. Before encountering one's enemy it is absolutely necessary to identify him, and in this case that is precisely what cannot be done. But even admitting the possibility of getting over this difficulty, what next? If foreign refined sugar were assessed so as to exactly balance the respective bounties, and if it is correct to suppose that the bounties are directly and solely responsible for the drooping condition of our home sugar industry, then, in that case, the foreigner would be shut out, and no duty would be paid into our national exchequer. This would enable the home refiner to lay an additional burden on the British consumer, as, freed not only from the adverse influence of foreign bounties, but from competition, he could raise the price of his commodity. This would correctly be described as class legislation, and the spirit of the age has set its face against it. The reply would doubtless be that the sugar industry is again thriving; that silent sugar-houses are things of the past; that labor is busily employed; that money circulates freely, and that the community reaps a great and solid advantage. As Greenock citizens, this is a consummation to be hailed, and one with which few would be found to quarrel. If the British people as a whole are willing to pay a little more for their sugar in order to conserve the interests of the few sugar-refining communities, Greenock, we are certain, would welcome the boon.

A FINE OPPORTUNITY FOR THE TORIES AND FAIR TRADERS.

Their pet scheme of a countervailing duty is surely now within their grasp. A strong conservative Government is now in office, and in the light of the recent pledges given by the "Liberal Unionists," it may be averred that not only are they in office, but also in power. It should surely be now or never with a countervailing duty. Now's the time and now's the hour. The present occupants of Downing street have often been gushing in their expressions of sympathy for worried and harassed industries. For the first time since the Beaconsfield régime, they have an opportunity of serving their friends. So long as they refrain from setting up a parliament in College Green, they will have the individual support of the Hartingtons and the Chamberlains, and nothing will be denied them. Let our countervailing friends take heart of grace and be up and doing. The Tories have no kindly feeling towards free trade, and it may be they will stretch a point to meet their own especial supporters. The Government cannot put forward as an excuse for non-compliance the lack of strength, for at present they are all-powerful. The demand for a countervailing duty will test

the sincerity of their former professions, and if the Tories and fair traders should succeed in converting the sugar trade into a thriving industry they will earn the gratitude of the community, and Greenock will be proud to embalm their services in her memory.

ARE BOUNTIES ALONE RESPONSIBLE FOR THE PRESENT UNSATISFACTORY CONDITION OF THE GREENOCK SUGAR TRADE?

In endeavoring to account for the languid condition of our sugar industry, it may be assumed that to some extent foreign bounties are responsible. But they are merely one of the contributory factors, and there are others which it may be well to drag into the light. It is evident that something like a permanent fall has taken place in the cost of sugar production, and if the trade were carried on under legitimate conditions the cheapness of the raw material would in easily understood ways be most advantageous to the refiner. He could carry on his business with less capital, and the low price of his commodity would enlarge the area of its consumption. But the trade is subjected to harassing and worrying conditions, which are perpetually destroying that natural relation of values that should subsist between the raw material and the finished product. What is known in commercial phraseology as "sugar rings" are formed by speculative capitalists, who control and manipulate the markets, and create artificial values. The legitimate dealer or sugar-refiner is at the mercy of huge gambling syndicates who subordinate everything to the attainment of their own personal ends. At present large stocks of beet-root are concentrated in Hamburg and other continental centers, and these are held by pure gamesters, who for their own nefarious purposes derange daily, and sometimes hourly, the entire sugar-exchange machinery of several countries. There also obtains a system of "forward contracts" which operates more injuriously than the bounties. For example, large purchases of the beet-root crop for December, 1887, have already been entered into. This is simply a game of hazard in which some must gain and others lose, and it tends to keep the trade in a perpetual state of paralysis. The crops referred to as already bought are not yet sown, and owing to the uncertainty of the weather, which may bless or blight, the prices given afford no guide to the value of next year's sugar. Beet-root sugar, unlike that of cane, is now sold without sample, and according to analysis, and it is transferred from hand to hand by paper warrants like those conveying iron and cotton. This favors the speculative game, and tends to produce uncertainty and confusion all round. The extent to which speculation now operates as a disturber and unhinger of industry would seem to call for the restraining influence of the legislative hand. In the mean time, however, refiners and others must cope with these difficulties as best they can, as they are powerless to extinguish them. There is one reform which the sugar trade has accomplished, and which is to take effect early next year. Hitherto it has been the trade custom to buy and sell beet-root sugar on the basis of 88 per cent. analysis, with an abatement or an advance of threepence per degree according as the sugar fell or rose above the 88 per cent. standard. This was not regarded as an equitable arrangement for the buyer and it is to be superseded by a better system. The standard consists of a hundred degrees, and whatever the analysis may be the sugar will be charged on the proportionate value that it bears to the whole. The result will be that refiners will know exactly where they stand, as they will pay precisely on the analytic yield.

A NEW DANGER.

In these days, all organized industries are liable to suffer from the progress of the arts and sciences. For the present the sugar trade has little to fear from the coal-tar and sorghum scares, but there is in advancing operation a tendency which may ultimately menace if not extinguish our home refining industry. This danger is to be read in the enormous and daily-growing quantities of sugar which enter the United Kingdom in a completely refined condition. Continental beet-root is refined on the spot where it is produced, and is thus fitted to enter into direct consumption, and this economical system of completing the process of sugar production on the spot is not confined to the Continent. It is in operation in Demerara, Surinam, and the Brazils. The sugar-growers in those countries are supplying themselves with plant and machinery which enable them to complete the process, and to send out their sugars ready for the table. The idea is not only natural, but economical, and is likely to be more and more adopted. The time may come, though scarcely yet within measurable distance, when all the sugar-producing countries may for themselves complete the process of sugar refining, and in that case our home refineries will have been found to have served their day. By that time, however, other industries will probably have arisen to take the place of sugar refining, and in any case such an eventuality will have to be submitted to and regarded as the inevitable outcome of natural progress.

ARE THE GREENOCK SUGAR REFINERS ABREAST OF THE TIMES?

The prosperity of the sugar trade is vital to Greenock and the question is put in the interest of the community. It is admitted that to some extent the Greenock refiners are suffering from causes over which they have no control. This ought to induce them in every way to strengthen their position, so as to enable them to encounter the difficulties that beset them. It is not doubted that their processes are modern and economical. The Greenock refiners have reduced waste to a minimum, and their machinery is excellently adapted for its purpose. This is so far well, but it is not everything. Are they studying the tastes of the consumers, and as regards quality and packages adapting themselves to the wants and markets of the time? We are informed that one or two sugar refineries in Greenock are abreast of the times, but that the trade as a whole is somewhat behind. A townsman who has been bred to the business, and who is thoroughly conversant with all its details, assures us that Greenock is in some danger of allowing itself to fall out of the ranks. We summarize the information he has placed at our disposal. He asserts that for years back the Greenock refiners have done little or nothing to improve the character of their sugars, with the result that they are losing their markets. At one time they found the best markets for their fine sugars in Scotland and the north of Ireland. At present the outlet for these sugars in the north of Ireland and the east coast of Scotland is all but closed to Greenock refiners. In these markets their sugars have been displaced by London and Liverpool crystals, and this not so much on account of cheapness as because the English crystals are better adapted to the taste of the consumers. And as regards the Greenock trade with the south of Ireland, it is now falling into the hands of London, Liverpool, and even Plymouth refiners. It is further stated that all the hard or loaf sugar required in Scotland has now to be brought from England or abroad, as Greenock refiners do not manufacture this kind of article. Many years ago a considerable quantity of the loaf sugar used in the country was made in Port-Glasgow and Greenock, from where it was shipped to various places in England and Scotland. Granulated sugar, for which a taste has been created in this country on account of its suitability for domestic purposes, cannot always be got on the Clyde, and this want is supplied by the continental refiner, who disposes of large quantitities of this sugar in this country. A Greenock refinery lately commenced to manufacture granulated sugar, but from whatever reason it has been discontinued. At one time sirups were largely made in Greenock and found a ready market all over Scotland, England, and even on the continent. The Greenock trade in sirups is now to a large extent extinct, it having been acquired by London and Liverpool houses. Another neglected field is that of exports. While Liverpool refiners are cultivating this trade and finding it profitable, making sugars to suit the taste of foreign buyers, Greenock refiners show a disinclination to make any change in their makes. The little export trade that is left the Greenock refiners are in danger of losing through not adjusting themselves to the wants of the foreign buyers in the matter of packages, marking, &c. The consular reports for some months back show that one of the principal reasons given for the neglect of British goods is the want of adaptability on the part of British manufacturers, and our informant states that this is specially true of Greenock refiners.

THE OLD GREENOCK REFINERS AND THE NEW.

Assuming the indictment to be true that the refiners of to-day are not marching with the times, it is not only a serious matter for themselves, but for an industrial community such as that of Greenock. A trade which in its present languid condition contributes 54 per cent. of the entire harbor trust revenue and about 33 per cent. of the local revenues ought at all hazards to be preserved. It is right that the refiners should make use of every legitimate endeavor to get rid of foreign bounties, but it is evident that their energies should also be expended in other quarters. The trade conditions of the time do not admit of antediluvian and conservative methods. It is only those who are able to catch the public taste and place the best article in the market at a minimum of cost who will succeed. It is more tempting to make a fortune in a day through the medium of speculation than to build up wealth through years of steady and resolute application to one's legitimate business. The speculative method is dangerous, while the latter is safer and better. But the modern refiner has been so accustomed to fat and easily-made margins that he chafes at the slower method. The men who conduct the sugar refining of to-day are a distinct type from those who many years ago laid the foundation of that industry in Greenock. These men—sagacious, practical, and energetic—anticipated the wants of the times, and for many years had the good fortune to possess a virtual monopoly which brought them in colossal returns altogether out of proportion to the capital and labor expended in the production of their commodity. It is easy to understand how the successors of such men should chafe at the severe competition unknown to their fathers,

and be slow to adjust themselves to the smaller profits now obtainable. But there is no alternative. The Greenock refiners must adapt themselves to the necessities of the altered situation. The economic laws are no respecters of persons, and they must accommodate themselves to the exigencies of the age like the rest of the commercial community. For the sake of Greenock and themselves, it is to be hoped that the Greenock refiners will buckle themselves anew to their enterprise and make their trade once again, as it has been before, a busy and thriving industry. In the meantime we wish them the compliments of the approaching Christmas season, and trust that at the close of 1887 it will be our pleasant duty to chronicle a more satisfactory condition of the Greenock sugar trade than it has been possible to do for the closing year.

TABLE I.—*Total imports of raw sugar into the United Kingdom*, 1875, *and* 1882 *to* 1886.

Year.	Amount.	Year.	Amount.
	Tons.		*Tons.*
1875	825, 000	1884	965, 000
1882	965, 000	1885	970, 000
1883	1, 005, 000	1886	895, 000

TABLE II.—*Total imports of raw sugar into Greenock*, 1875, *and* 1882 *to* 1886.

Year.	Amount.	Year.	Amount.
	Tons.		*Tons.*
1875	247, 000	1884	260, 000
1882	250, 000	1885	260, 000
1883	260, 000	1886	212, 000

TABLE III.—*Total raw sugar refined in Greenock*, 1875, *and* 1882 *to* 1886.

	1875.	1882.	1883.	1884.	1885.	1886.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Beet-root	33, 000	87, 000	113, 000	142, 000	160, 000	122, 500
Java	30, 000	67, 000	92, 000	73, 000	57, 000	93, 500
British West India	47, 000	33, 000	13, 000	15, 000	11, 000	9, 500
Other sorts	133, 000	53, 000	27, 000	10, 000	15, 000	12, 000
Total	243, 000	240, 000	245, 000	240, 000	243, 000	237, 500

TABLE IV.—*Average price of Java sugar, No.* 14 *D. S.*, 1875, *and* 1882 *to* 1886.

[Highest price 34*s.* 6*d.*, November, 1876; lowest price 12*s.* 9*d.*, August, 1886.]

Month.	1875.	1882.	1883.	1884.	1885.	1886.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
January	25 6	26 0	23 9	21 6	14 0	16 0
February	25 6	25 0	23 6	21 0	14 9	15 9
March	25 0	25 3	24 9	19 6	15 0	14 3
April	26 0	26 0	25 0	19 0	15 6	14 6
May	26 0	25 0	24 9	18 6	18 0	15 0
June	25 6	25 6	24 6	17 3	19 0	13 3
July	25 0	25 3	24 0	16 9	16 6	13 3
August	25 3	26 0	24 0	15 9	17 0	13 3
September	24 6	25 6	24 3	15 3	17 9	13 0
October	24 6	25 0	23 9	15 3	17 6	13 6
November	24 3	24 6	23 3	15 0	17 3	13 0
December	24 6	24 0	22 3	13 9	18 0	13 9

TABLE V.—*Price of beet-root sugar, 88 per cent.*, 1875, *and* 1882 *to* 1886.

[Highest price 34*s.* 6*d.*, November, 1876; lowest price 10*s.* 3*d.* December, 1884.]

Month.	1875.	1882.	1883.	1884.	1885.	1886.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
January	22 3	22 0	19 9	18 0	10 6	14 6
February	22 0	21 9	19 3	17 6	11 9	13 9
March	22 6	22 0	21 0	16 9	11 9	12 3
April	23 6	23 3	21 3	15 6	13 0	13 0
May	23 3	23 0	21 3	15 0	16 0	13 0
June	23 6	22 9	21 3	14 0	16 3	10 6
July	22 0	22 6	20 9	13 3	15 0	11 0
August	21 0	22 6	20 9	12 3	15 3	11 0
September	24 3	22 0	20 6	11 0	15 6	11 0
October	20 0	21 3	19 6	11 6	14 9	11 0
November	19 0	20 0	18 9	10 9	15 0	10 6
December	19 0	19 9	18 0	10 3	15 6	11 0

TABLE VI.—*Average price of good brown British West India sugar*, 1875, *and* 1882 *to* 1886.

Month.	1875.	1882.	1883.	1884.	1885.	1886.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
January	21 6	21 0	19 6	17 6	11 0	14 6
February	21 0	21 0	19 0	17 3	11 3	13 6
March	20 0	21 3	21 0	15 0	11 9	12 6
April	21 3	22 0	21 6	14 0	12 6	13 6
May	21 0	22 0	21 0	15 0	16 0	12 3
June	20 3	21 6	21 0	13 0	16 0	11 0
July	19 6	21 6	20 6	12 6	14 6	11 6
August	20 0	21 6	20 0	11 0	15 0	11 0
September	19 6	21 6	20 0	10 6	15 0	11 6
October	19 0	21 0	19 6	11 6	14 6	11 6
November	19 0	20 6	19 0	11 0	14 9	11 0
December	19 0	20 6	18 6	11 0	15 6	11 3

TABLE VII.—*Price of medium refined sugar*, 1875, *and* 1882 *to* 1886.

Month.	1875.	1882.	1883.	1884.	1885.	1886.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
January	25 6	25 0	25 0	22 0	15 0	17 0
February	25 6	25 0	24 9	22 0	15 3	15 9
March	25 3	25 0	26 3	19 6	15 3	15 6
April	26 0	25 6	26 0	19 0	16 0	16 9
May	25 3	25 9	25 0	19 0	19 6	15 0
June	25 3	25 6	25 0	18 0	18 6	15 3
July	25 3	26 0	26 6	18 0	17 0	15 0
August	25 3	25 6	25 0	18 0	18 0	14 0
September	24 9	25 6	24 0	16 0	18 0	14 3
October	24 9	25 0	23 6	17 0	17 9	14 3
November	24 9	24 6	23 6	15 0	17 9	14 3
December	24 9	24 0	23 0	15 0	18 9	14 9

TABLE VIII.—*Imports of foreign refined sugar into United Kingdom*, 1875, *and* 1882 *to* 1886.

Year.	Amount.	Year.	Amount.
	Tons.		*Tons.*
1875	100,000	1884	200,000
1882	128,000	1885	250,000
1883	158,000	1886	325,000

TABLE IX.—*Total annual direct contributions of the sugar trade to local revenues.*

Years.	Harbor trust.*	Water trust.	Poor and education assessments.	Police and other assessments.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1874–'75	36,293 14 3	6,874 10 0	1,449 7 8	1,524 8 4
1883–'84	31,291 0 4	8,672 12 1	1,366 6 10	1,550 8 8
1884–'85	35,926 14 0	8,168 3 1	1,368 7 11	1,527 8 5
1885–'86	†33,000 0 0	‡7,824 16 7	§1,537 10 8	‖1,785 13 0

SUMMARY, 1885–'86.

	£ s. d.
Harbor trust	33,000 0 0
Water trust	7,824 16 7
Poor and education rates	1,537 10 8
Police and other assessments	1,785 13 0
Total	¶44,148 0 3

* This represents dues on sugar and on sugar-laden vessels discharged at Greenock; rent on harbor trust sheds and warehouses; dues on sugar shipped at Greenock and on sugar-carrying vessels entering the graving docks, &c.

† Equal to 54 per cent. of total harbor trust revenue (£60,313 10*s.* 6*d.*)

‡ Equal to 33.7 per cent. of total water trust revenue (£23,171 18*s.* 6*d.*)

§ Equal to 7.6 per cent. of total poor and education assessments (£20,189 12*s.* 2*d.*)

‖ Equal to 5.4 per cent. of total police revenue (£33,231 13*s.* 4*d.*)

¶ Equal to 32.5 per cent. of total revenues ordinary— (£136, 906 14*s* 6*d.*)

THE SUGAR TRADE OF 1886.

Glasgow Herald, Wednesday, December 29, 1886. Written by James Dunn, esq., a leading authority.]

Transmitted by Consul Underwood, of Glasgow.

The improvement which characterized the course of prices in 1885 has been altogether reversed throughout the currency of the present year, and it has again become necessary to deal with figures which have almost steadily tended towards what must be regarded as the panic values which marked the close of 1884. The advance which had been established at the end of the former year gave rise to a very general belief that the crucial period had been passed, and that the value of the article was still destined to make further progress in the same direction. This view readily received a substantive shape in the preparations which about the beginning of the present year were universally made for increasing the cultivation, with the result that, as the season advanced the estimate of future supplies surpassed all former calculations, and the consequence has been a total reversal of those anticipations which at an earlier period had been formed upon the subject. This state of things has also largely resulted from incentives to over-production in further developments of the bounty system in certain continental countries. At the opening of the year the price of 88 per cent. beet-root was 15*s.* 9*d.* f. o. b., while Java cargoes, off coast, stood at about 18*s.* per cwt. Since then and down to the date of this report the total fall in the value of both descriptions has been about 4*s.* 6*d.* per cwt., to-day's selling prices being 11*s.* and 13*s.* 6*d.* for beet-root and Javas respectively. The prices at which the market opened in the early days of January were the highest touched at any time throughout the year, while beet-root in November fell to 10*s.* 1½*d.*, and Java in August to 12*s.* 9*d.*, these prices being only 4½*d.* higher in the case of beet-root, and actually 9*d.* per cwt. lower as regards Java sugar than the minimum selling points of 1884. A reaction, however, which set in towards the beginning of November, added about 1*s.* 6*d.* per cwt. to values, but since then, as has been seen, that addition has been partially swept away. In order to provide a proper and complete record of all the changes which did occur, the value of both descriptions in each week may be stated as follows:

Date.	Eighty-eight per cent. beet-root, f. o. b. Hamburg prompt.		No. 14 Javas, off coast, floating conditions, landing weights.	
	Highest.	Lowest.	Highest.	Lowest.
1886.	s. d.	s. d.	s. d.	s. d.
Jan. 9	15 9	15 6	17 9	17 4½
Jan. 16	15 4½	14 9	17 3	16 9
Jan. 23	15 0	14 7½	16 6	16 3
Jan. 30	14 7½	14 0	16 6	15 9
Feb. 6	14 3	13 9	16 0	15 9
Feb. 13	14 3	13 7½	16 0	15 7½
Feb. 20	13 6	12 9	15 0	14 9
Feb. 27	13 4½	12 10½	15 6	15 0
Mar. 6	13 3	13 0	15 6	15 0
Mar. 13	13 1½	12 10½	15 6	15 0
Mar. 20	12 10½	12 3	15 4½	14 3
Mar. 27	12 7½	12 4½	14 9	14 6
Apr. 3	12 10½	12 3	15 0	14 6
Apr. 10	12 9	12 3	15 0	14 6
Apr. 17	13 1½	12 9	16 0	15 0
Apr. 24	13 6	13 0	15 9	15 6
May 1	13 9	13 0	16 0	15 6
May 8	13 3	12 9	15 9	15 6
May 15	13 0	12 6	15 3	14 6
May 22	12 7½	12 0	14 6	14 3
May 29	12 4½	11 7½	14 3	14 0
June 5	11 9	11 0	13 9	13 6
June 12	11 1½	10 4½	13 6	13 3
June 19	11 1½	10 7½	13 9	13 6
June 26	11 1½	10 9	13 9	13 6
July 3	11 3	11 0	13 9	13 6

Date.	Eighty-eight per cent. beet-root, f. o. b. Hamburg prompt.		No. 14 Javas, off coast, floating conditions, landing weights.	
	Highest.	Lowest.	Highest.	Lowest.
1886.	s. d.	s. d.	s. d.	s. d.
July 10	11 4½	11 3	13 9	13 6
July 17	11 7½	11 4½	13 10½	13 3
July 24	11 7½	11 3	13 9	13 6
July 31	11 6	11 0	13 9	13 6
Aug. 7	11 3	10 10½	13 6	13 3
Aug. 14	11 3	10 10½	13 6	13 3
Aug. 21	11 3	11 0	13 0	12 9
Aug. 28	11 3	10 10½	13 0	12 9
Sept. 4	11 3	10 9	13 0	12 9
Sept. 11	11 3	11 0	13 6	13 3
Sept. 18	12 0	11 3	13 9	13 6
Sept. 25	11 10½	11 7½	14 0	13 9
Oct. 2	11 9	11 1½	14 0	13 9
Oct. 9	11 1½	10 9	13 9	13 6
Oct. 16	11 0	10 7½	13 9	13 6
Oct. 23	10 10½	10 9	13 6	13 4½
Oct. 30	10 9	10 3	13 6	13 3
Nov. 6	10 4½	10 1½	13 6	13 3
Nov. 13	10 7½	10 3	13 6	13 3
Nov. 20	10 10½	10 6	13 6	13 3
Nov. 27	10 10½	10 6	13 6	13 3
Dec. 4	11 0	10 9	13 6	13 3
Dec. 11	11 6	10 10½	13 9	13 6
Dec. 18	11 6	11 0	13 9	13 6
Dec. 25	11 1½	11 0	13 9	13 6

While for the purpose of comparing the fluctuations this year with those experienced within the limits of each of the ten immediately preceding years the following table is submitted:

Years.	Price of 88 per cent. beet-root per cwt., f. o. b. Hamburg.		Price of Java sugars, No. 14/15 floating terms.	
	Highest.	Lowest.	Highest.	Lowest.
	s. d.	s. d.	s. d.	s. d.
1876	29 9	18 6	35 0	22 9
1877	26 0	19 6	33 0	24 3
1878	22 9	19 6	26 9	23 6
1879	29 0	19 9	30 3	22 9
1880	25 6	19 4½	29 6	24 9
1881	24 0	20 9	28 3	25 1½

Years.	Price of 88 per cent. beet-root per cwt., f. o. b. Hamburg.		Price of Java sugars, No. 14/15 floating terms.	
	Highest.	Lowest.	Highest.	Lowest.
	s. d.	s. d.	s. d.	s. d.
1882	22 9	19 9	26 4½	24 3
1883	21 7½	18 0	25 6	21 6
1884	18 4½	9 9	21 10½	13 7½
1885	16 9	10 0	19 0	13 10½
1886	15 9	10 1½	17 4½	12 9

In connection with the more admittedly speculative dealings in which, as in stock exchange transactions, operations for differences or adventures of the nature of "bulling" and "bearing" form a large part of the business, the Paris Bourse quotations, as furnishing the best evidence of what has been possible in these respects, and as indicating the force of opinion on all questions affecting the article, require to be specially referred to. At the beginning of January that market opened with quotations for No. 3 crystals for delivery in March–June, and May–August at 49 francs per 100 kilograms (equal to about 19*s.* 11*d.* per cwt.) for the former and 49.25 francs per 100 kilograms (or equal to about 20*s.* per cwt.) for the latter period, and when these quotations ceased on February 27 and April 30 following the values in each case had declined to 40.12½ francs per 100 kilograms = 16*s.* 3½*d.* per cwt., and 40 francs per 100 kilograms = 16*s.* 3*d.* per cwt. respectively. On February 1 the quotation for the new crop for delivery in October–January began at 42.75 francs per 100 kilograms = 17*s.* 4½*d.* per cwt., and on October 30, when operations ended for what remained of that period, namely, November–January, the price had gone down to 31.25 francs per 100 kilograms, or equal to about 12*s.* 8*d.* per cwt. Then on August 2 the transactions for January–April began by sales at 34.75 francs per 100 kilograms, or equal to 14*s.* 1*d.* per cwt.; and on October 14 March–June commenced at 34.25 francs per 100 kilograms,

or equal to 13s. 11d. per cwt.; while at this date the price for January–April is 33.87½ francs, or equal to 13s. 9d. per cwt. The current quotation is for March–June of the incoming year, and the result so far shows a difference in favor of buyers or "bulls" which is only fractional. The following have been the highest and lowest quotations for the various periods for which operations occurred throughout the year:

Prices of Paris No. 3 crystals per cwt. during 1885.

Delivery.	Highest.	Lowest.
1886.	s. d.	s. d.
March–June	19 11	15 11
May–August	20 0	16 1
October–January	17 9	12 7
1887.		
January–April	14 11	12 11½
March–June	14 5½	13 3

The imports into the United Kingdom this year, according to the Board of Trade returns, show that whilst the weight of raw sugar landed has again decreased, that of refined has moved in an opposite direction; and as this is just the position of affairs which is most to be deplored, the figures pertaining to the subject, in their application to sugar refining as a British industry, are anything but satisfactory. For the eleven months ending November 30 last the total quantity received was 1,037,380 tons, and adding 100,000 tons for December as the average monthly importation, in order to account for the full year's receipts, it may be set down at 1,137,380 tons. Of this quantity 811,582 tons may be stated to be raw sugar and 325,798 tons as foreign refined, which, set against 969,187 tons of the former and 266,902 tons of the latter imported in 1885, 982,618 tons and 213,334 tons in 1884, and 1,017,853 tons and 164,273 tons in 1883, shows that whilst the importations of raw sugar into this country have this year been 157,605 tons under those of 1885, 171,036 tons under 1884, and 206,271 tons under 1883, the receipts of refined have been increased as against those of 1885, 1884, and 1883 by 58,896 tons, 112,464 tons, and 161,525 tons respectively. Of the importations of raw sugar up to November 30, 303,380 tons were beet-root, and 438,202 tons cane produce. Regarding the deliveries of raw sugar for refining purposes, the quantity employed this year is 32,000 tons short of what was so used in 1885 and 62,000 tons under that of 1884. The following are the particulars of both imports and deliveries of raw sugar for the past ten years, together with the stocks at the end of each year:

Years.	Total imports of raw sugar into United Kingdom.	Total deliveries of raw sugar in four ports.	Total stocks of raw sugar in four ports.	Years.	Total imports of raw sugar into United Kingdom.	Total deliveries of raw sugar in four ports.	Total stocks of raw sugar in four ports.
	Tons.	*Tons.*	*Tons.*		*Tons.*	*Tons.*	*Tons.*
1876....	780, 610	783, 656	89, 637	1882...	991, 961	869, 623	209, 749
1877....	831, 047	725, 110	171, 699	1883...	1, 017, 853	979, 087	224, 363
1878....	745, 919	791, 489	100, 692	1884...	982, 618	927, 327	262, 631
1879....	836, 711	817, 653	151, 705	1885...	968, 187	897, 199	258, 561
1880....	850, 980	829, 414	134, 622	1886...	811, 582	875, 256	188, 000
1881....	932, 569	872, 699	144, 187				

The imports of foreign refined sugar have been as follows:

Years.	Tons.	Years.	Tons.
1876	139, 820	1882	138, 452
1877	171, 492	1883	164, 273
1878	163, 324	1884	213, 354
1879	150, 941	1885	266, 902
1880	151, 715	1886	325, 796
1881	139, 179		

The following are the full particulars of the imports of raw and refined sugar, according to the Board of Trade returns, up to 30th November:

Raw.

	Tons.
Germany	257, 519
Holland	12, 752
Belgium	31, 239
France	1, 870
British West Indies and Demerara	91, 714
British East Indies	36, 984
China and Hong-Kong	2, 413
Mauritius	13, 987
Spanish West India Islands	1, 070
Brazil	25, 573
Java	190, 197
Philippine Islands	26, 551
Peru	21, 115
Other countries	28, 648
	741, 582
Add probable imports for December	70, 000
Total	811, 582

Refined.

	Tons.
Germany	79, 761
Holland	54, 684
Belgium	5, 041
France	44, 335
United States	70, 905
Other countries	41, 072
	295, 798
Add probable imports for December	30, 000
Total	325, 798
Grand total	1, 137, 380

In dealing with the general question of importations reference was made to the increasing importance of the trade in foreign refined as compared with the regrettable state of affairs observable in connection with business in the raw article, but as changes even here have occurred it becomes necessary to revert to the matter as a separate and distinct issue. These changes, which have reference mainly to the sources of supply, have, of course, arisen from the treatment which the bounty as a stimulating medium required to undergo towards deciding the supremacy of one or other of the contesting countries. Beginning with the year 1880 and continuing onwards to 1883, France held the field as being by far the greatest exporter. In each of these years she never sent less than 65,000 tons, while in 1880, and again in 1883, her exports to this country reached 79,150 tons and 72,190 tons respectively. During the same term of years Holland occupied the second place with 40,363 tons in 1881, 39,518 tons in 1882, and 50,453 tons in 1883. In 1884 France began to show signs of weakness, and Holland, with an export of 66,373 tons that year against 52,310 tons from France, now stood at the head of the list. In the same year America entered the field, and when the result at its close became apparent it was seen that she only fell short of France by 197 tons, her exports having amounted to 52,113 tons. The American refiners having thus experienced the benefits accruing to themselves from the system of bounties now took up the matter in an energetic way, for at the end of the following year, 1885, it was made clear that they had not only become the leading exporters, but that they had in fact, with exports reaching the enormous aggregate of within a fraction of 115,000 tons, taken possession of fully two-fifths of the entire trade. Holland in that year contributed 63,855 tons, or 2,518 tons less than she did in 1884, while France had sunk to the level of a third-rate bounty giver, as seen in the reduction of her exports to 24,746 tons, or not quite one-half her returns for the immediately preceding year. All the time this varying contest was being waged, Germany was making that steady progress for which, as in other matters, she has been distinguished. For the eleven months of the present year, Germany stands at the top with 79,761 tons. America has, in consequence of strikes and reductions in her drawback, fallen to 70,905 tons; while France, which has only yet had a short experience of her new scale of premiums, has recovered her position by exporting 44,335 tons. Holland has sent 54,684 tons, and Russia 41,000.

The stock of sugar held in this country and available for the immediate requirements of the trade began with 261,000 tons in January, which, with moderate fluctu-

ations, was increased to 330,000 tons towards the latter end of June. From that period down to the present date the quantity has been reduced to 188,000 tons.

The exports of raw sugar for eleven months have been 31,655 tons against 21,155 tons for the same period last year.

The total exports of British refined sugar from the United Kingdom for the eleven months ending 30th November last have been 39,938 tons, and in this respect it is again noticeable that a further contraction in the trade has taken place. In 1884, when prices took much the same course they have done this year, the exports reached 59,884 tons, while last year, when prices followed an ascending scale, they were 46,826 tons against 52,574 tons in 1883, 48,072 tons in 1882, and 40,031 in 1881.

Comparing the entire business of this country with what has taken place in the four American ports, it appears that the total quantity passing into the commerce of these markets down to the 30th November last was 1,037,380 tons in the case of Great Britain and 1,090,955 tons as regards America. That of these respective quantities 295,798 tons were received into the United Kingdom as refined and 741,582 tons as raw sugar, while the total quantities delivered from these imports, and from the stock left over from last year, were 784,654 tons for refining purposes, 31,655 tons of raw sugar were re-exported, while 10,242 tons and 39,938 tons were also exported as foreign and British refined respectively. As concerns America 1,090,955 tons were imported, of which 1,032,039 tons were melted, and of the latter, 73,853 tons were exported as granulated, cubes, &c., while 10,387 tons in a crude state were transferred to other markets. With respect, therefore, to the question of refining, the American returns exceed those of the United Kingdom by 247,385 tons. The imports into America up to 30th November have consisted of 974,662 tons of foreign cane sugar and 115,000 tons of beet-root, against 996,806 tons and 86,122 tons as the total of last year, while the exports of refined have been 73,853 tons against 110,298 tons for the eleven months of 1885. The consumption of sugar in the States and in the United Kingdom for the three past years compares as follows:

Years	Through the four Atlantic ports.	In the United Kingdom.
	Tons.	*Tons.*
1884	935,648	1,080,232
1885	998,409	1,153,581
1886*	1,033,962	1,113,019

*Estimate up to end of year.

The visible supplies of sugar available for Europe and for those markets on the Atlantic seaboard of America which, to a large extent, draw from the same sources, always continued in sufficient abundance to meet all the possible demands likely to be made upon them. Indeed, in this respect, the figures given from time to time throughout 1886 kept so well abreast of those stated for the corresponding dates in the preceding year that the deficiency of 600,000 tons predicted as certain to result from the crop of 1885-'86 never appeared in such a shape as to affect to anything like that extent the comparative position of these two epochs. The lowest point to which the supplies fell this year was 707,000 tons, while the minimum last year was 844,000 tons. The greatest difference occurred in December current, when the figures indicated an apparent deficiency of 212,000 tons as compared with those at the corresponding period last year. This shortcoming was, however, naturally viewed with indifference, appearing as it did on the eve of the ingathering of a crop generally understood to be the largest on record. At the close the visible supply stands at 1,170,000 tons against 1,200,000 tons at the end of 1885.

As it has been altogether owing to the system of bounties granted on the export of sugar by the producing countries of the Continent that, within the last year or two, a supply largely in excess of the strict requirements of the trade has been reached, and a consequent disturbance in the values of the article created, it appears after what has been stated in these respects that the position of this question deserves to be considered at some length. This indeed becomes the more necessary at a time when the system itself is *in extremis*, and while there is yet an opportunity for considering it in a contemporaneous sense. The sugar bounties in certain continental countries have been in operation for over twenty years, but it was not until after the great war between France and Germany that they had any appreciable effect on prices. After the struggle with Germany in 1870 the French Government, with the view to putting their finances in a sound position, materially raised the import duties on most of the articles imported into France, and among these articles was sugar. The effect of this was that the dif-

ference that existed between the import duty and the drawback granted on export was increased to such an extent as to amount to a substantial bounty. Remonstrances at the instance of colonial producers, sugar refiners, and the sugar trade generally, were made by the British Government, who maintained that this action on the part of the French Government was a direct contravention of the agreement entered into between Britain, France, Holland, and Belgium in 1864 for the suppression of all bounties on the export of refined sugar. For three or four years a diplomatic war was fought by the Governments of Britain, Holland, and Belgium against that of France, and several international conferences were held which were all of no avail against the apparent determination of France to hold on its course. At length the French Government suddenly came to reason on the subject, and of its own motive introduced an alteration in their fiscal policy, so far as sugar was concerned, which had the effect of somewhat reducing the export bounty. By the time, however, that the advisability of such changes had occurred to the French every loaf sugar refinery in Great Britain save one had been silenced.

After these reforms in the French law one English loaf refinery reopened, and two refiners, who up to that point had been making soft sugar, turned their attention to loaf sugar, with, it is said, some pecuniary success. To the astonishment of the sugar trade no sooner had the French modified their bounties on exports than Holland, which had been loudest in the cry against the proceedings of the French Government for their breach of the convention of 1864, engaged in the contest, and by alterations in her duties and drawbacks so arranged that the Dutch refiners should have as great a bounty as the French refiners had enjoyed. The Dutch Government were remonstrated with, but they treated all remonstrances with indifference. Their bounties on the export of sugar are still in operation, and would be more directly felt were it not that other nations have far out-distanced them in connection with a largess which provides the people of this country with sugar below the natural cost of production. At this time Germany entered as a combatant in the bounty war, but with a different plan of campaign. She did not propose so much to subsidize her sugar refiners as to benefit her sugar manufacturers, and through them the agricultural interest. By the law which the German Government passed the duty was levied on the weight of the roots that went into the fabrics instead of the finished product that was delivered therefrom. The estimated quantity of sugar that could be extracted from a given quantity of roots was much less than the actual quantity obtained, and thus the bounty was secured. The German manufacturers by skillful chemical and mechanical processes gradually increased the quantity they could extract from the roots, and were thereby enabled to augment their bounty. The consequence of this was that the manufacture of raw sugar (that is, all sugar made in the fabrics, crystals, 88 per cent. and second products) increased yearly until in the campaign of 1884–'85 they produced over 1,100,000 tons, a vast addition to the campaign of 1874–'75, when they produced only 250,000 tons. By this action on the part of the German Government the raw sugar manufacturing industries of France, Belgium, and Holland were entirely crippled, and the fabricants of these nations, especially those of France, were brought to the verge of ruin.

The quantity of sugar produced in France from the crop of 1884–'85, as compared with 1874–'75, was reduced by upwards of 140,000 tons, the figures being, 1874–'75, 450,877 tons, and 1884–'85, 308,410 tons, and this notwithstanding the fact that the total continental beet-root production increased from 1,165,356 tons in 1874–'75 to 2,545,889 tons in 1884–'85. Austria, too, entered the lists and gave a bounty to her manufacturers which went on for a time, but it has fallen to her lot to demonstrate very clearly the weakness of the system, because in the campaign of 1879–'80 the total revenue from the duty on sugar consumed in Austria was not only swallowed up by the export bounty, but the Austrian treasury had actually to pay over 1,373,362 florins besides. This naturally gave the Austrian Government an insight into the working of the system, and after repeated alterations in the method of levying the duty they eventually fixed a minimum revenue which they were bound to get from sugar, this minimum revenue to be increased every year until a certain amount is reached. The Austrian bounty is thus being gradually decreased. Latterly, and in the face of such a warning, Russia adopted the system. In July, 1885, the Russian Government, in order to avoid the ruin, and at the instigation of the Russian sugar manufacturers, issued a decree granting a bounty of 1 ruble per pood, equal to about £6 5s. per ton, on all sugar exported. The result of this was that the British market was deluged with Russian sugar during December of last year and the first three or four months of this year; in all, something like 40,000 to 50,000 tons were sent to Great Britain. Some of this sugar went into the refineries, a considerable portion went into direct consumption, and the balance still lies in warehouse in London. The finances of the Russian Government, however, not being in a state to bear this strain, the withdrawal of the bounty has since been intimated. Whilst all the countries referred to have at least had the pretext of stimulating a natural industry, the case which now falls to be considered, namely, that of the United States, admits of no such compromise, and for

this reason, and for the still stronger one that the granting of bounties on export is in direct violation of one of the fundamental laws of the United States it is perhaps more extraordinary than any of the others.

The Government of the United States passed a law in July, 1883, the effect of which was that a bounty of 39 cents per 100 pounds, equal to 1s. 9¼d. per cwt., on all hard sugar, granulated, &c., was derivable from exports. The consequence of this has been that raw sugar imported from Europe and the West Indies can be refined in New York and re-exported to England at a price considerably under what it stands the consumer on the spot. This generosity on the part of the citizens of the United States in taxing themselves to give the English people cheaper sugar than they themselves enjoy has been the means of increasing their yearly exportations to this country from 2,340 tons in 1882 to something like 115,000 tons in 1885. A petition which was presented to the Government at Washington by a number of merchants and other traders throughout the States who did not enjoy the privileges of their sugar-manufacturing brethren gave rise to an inquiry into the question, and recently a reduction of 22 cents per 100 pounds was provisionally ordered pending a further investigation as to the remaining 17 cents still left for the United States refiners. The latest development of the bounty hallucination has been the action of the French Government in adopting the tactics of that of Germany in furthering their sugar manufactures. In order to outdo the relatively moderate German bounty, however, the French have so arranged that their fabricants shall now have a bounty of about £7 to £8 per ton. According to the most recent advices, the richness of the roots for the campaign 1886-'87 is estimated to give a yield of about 10 per cent., and as the duty is only levied on the assumption of a yield of 6 per cent., 40 per cent. of the sugar produced will be exempt from duty. The estimated production of this campaign is about 500,000 tons. Forty per cent. of this gives 200,000, which at say 45 francs per 100 kilograms will leave a deficit to the French treasury of about 90,000,000 francs, equal to about three million and a half sterling.

With this sum the French manufacturers are flooding the British markets with crystals which, being fit for immediate consumption, present an element of competition against which the English refiner cannot possibly cope. What the next phase in the "war of bounties" will be it is impossible to predict. This latest move on the part of France is, however, the *reductio ad absurdum*, and so it is to be hoped that, this stage having at length been reached, some change which will place the sugar trade on a more equitable basis cannot be distant. It is rumored that the British Government have taken up the question, and are at present negotiating for the assembly of an international conference of all the powers interested for the purpose of coming to some agreement towards a remedy either by the abolition of duties on sugar in all the countries or by some other means which will have the same effect. This rumor, however, requires confirmation.

With reference to the estimates of the crops which for the year 1887 must furnish sugar for Europe and for those States of the American Republic which draw their supplies from the same sources the present calculation is that the total production will reach 4,983,000 tons, and that the following is likely to be the order in which that quantity is to be contributed:

Countries.	Estimate 1886-'87.	Yield 1885-'86.	Countries.	Estimate 1886-'87.	Yield 1885-'86.
Cane sugar.	*Tons.*	*Tons.*	*Cane sugar*—Continued.	*Tons.*	*Tons.*
Cuba	775,000	692,000	Natal	12,000	15,000
Java	365,000	366,000	Antigua and St. Kitts	20,000	20,000
Brazil	300,000	190,000			
Manila	170,000	220,000	Total	2,403,000	2,267,900
Louisiana	105,000	127,900			
Demerara	118,000	110,000	*Beet-root sugar.*		
Mauritius	100,000	114,000			
Porto Rico	45,000	40,000	Germany	950,000	825,080
East Indies	50,000	50,000	Austria-Hungary	525,000	377,031
Trinidad	60,000	51,000	France	500,000	298,407
Guadeloupe	40,000	36,000	Russia and Poland	475,000	560,312
Martinique	40,000	33,000	Belgium	80,000	48,421
Barbadoes	55,000	44,000	Holland, &c	50,000	37,500
Réunion	34,000	34,000			
Jamaica	18,000	19,000	Total	2,580,000	2,146,751
Peru	40,000	35,000			
Egypt	50,000	65,000	Grand total	4,983,000	4,414,651
Surinam	6,000	6,000			

The business of refining in the local markets of Glasgow and Greenock has been reduced to a considerable extent during the year. The stock of raw sugar at the open-

ing of the year was 66,334 tons. The imports of all descriptions of that material since then and down to the present date have been 201,805 tons. Of the aggregate of 269,139 tons as the supply available in the Clyde markets throughout the year, 233,266 tons have been delivered for refining purposes, whilst 745 tons were transhipped to other markets, thus leaving 34,128 tons of stock to be carried forward to 1887. These deliveries for refining show a diminution of 9,475 tons as compared with last year's work, and it is still more unsatisfactory to remark that contrasted with the lowest returns during the previous ten years, namely, those of the year 1876, when 239,410 tons were employed, there has been a falling off of 6,144 tons. The said imports have consisted of 84,909 tons of cane and 116,896 tons of beet-root sugar. The beet-root has been chiefly of German production, while the cane produce has been almost entirely made up of direct importations and purchases of off-coast cargoes of Java sugars. The British colonies, which in former times were the mainstay of the Clyde sugar trade, have this year only contributed 7,753 tons to its supplies. The stock assumed its largest proportions in May, when over 86,000 tons were estimated as being in warehouse. The figures thereafter followed a somewhat rapid downward course until about 33,000 tons appeared as the quantity in store in the first half of the current month. To-day the stock is estimated, according to Messrs. William Connal & Co.'s returns, at 34,128 tons.

The following table gives a comparison of stocks, imports, and deliveries to refineries from 1876 to the end of the present year:

Years.	Stocks at end of year.	Total imports.	Total deliveries.	Years.	Stocks at end of year.	Total imports.	Total deliveries.
	Tons.	*Tons.*	*Tons.*		*Tons.*	*Tons.*	*Tons.*
1876	17,566	225,834	239,410	1882	46,760	250,146	240,183
1877	39,610	262,844	240,462	1883	61,578	260,631	245,141
1878	21,784	243,796	250,745	1884	48,898	229,643	242,332
1879	32,338	247,364	246,330	1885	66,334	260,737	243,301
1880	30,668	243,352	214,308	1886	34,128	201,805	234,011
1881	36,792	270,929	260,299				

Compared with London, Liverpool, and Bristol, the following are the results:

Years.	Imports.				Deliveries.			
	London.	Liverpool.	Clyde.	Bristol.	London.	Liverpool.	Clyde.	Bristol.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1881	335,548	258,745	270,929	43,850	332,529	251,724	260,299	44,550
1882	364,563	292,845	250,146	45,850	334,186	269,719	240,183	44,940
1883	385,178	287,093	260,631	55,930	397,460	284,944	245,141	52,950
1884	349,187	314,988	229,643	54,208	352,037	280,724	242,332	55,040
1885	325,813	262,657	260,737	53,526	326,911	277,441	243,301	49,546
1886	306,111	239,732	201,805	55,103	324,456	257,389	234,011	59,400

From these deliveries it appears that the decrease in refining in the United Kingdom chiefly applies to Liverpool.

The exports of Clyde-made sugars are about 11,000 tons, against 14,183 tons last year, and have thus shared in the weakness which has been observable in this branch as a whole. The following is a comparison of ten years' business:

Years.	Tons.	Years.	Tons.
1876	26,684	1882	18,034
1877	15,900	1883	16,021
1878	18,000	1884	23,004
1879	18,000	1885	14,183
1880	19,146	1886	11,000
1881	16,520		

This position of affairs as regards exports is all the more surprising, seeing that the prices for Clyde sugars this year have maintained relatively as low a level as those of

other markets, and have in fact exhibited a lower average value than at any previous period. The following table gives a comparison of this year's values with those of the past five years:

Years.	Crystals.		Good medium.		Good yellow.		Low yellow.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1881	33 0	31 6	29 6	26 6	26 0	23 0	23 9	20 0
1882	32 3	30 3	27 0	24 3	23 9	20 9	20 3	17 0
1883	31 0	29 9	24 0	21 0	20 6	17 6	18 6	15 6
1884	29 6	20 6	20 6	12 6	16 9	10 6	15 6	9 0
1885	23 3	19 3	21 0	13 0	19 0	11 3	17 9	10 3
1886	22 0	17 3	19 3	15 3	16 6	9 9	13 3	8 9

As illustrative of the low condition to which this once valuable commodity has fallen, it may be observed that, considered weight for weight, it now ranks in point of retail value with such articles as oatmeal, barley, pease, flour, &c. Now, when it is remembered how little is needed to bring any of these commodities to the market as compared with the costly chemical and mechanical processes needful to produce and refine sugar, it appears, considering the principle upon which this anomalous position of affairs depends, as if the time for some important change could not be distant.

Of the 326,000 tons of foreign refined sugar imported into the United Kingdom this year about one-third of this quantity has passed into consumption through the medium of Glasgow importers. The following are the highest and lowest prices of each month during the year:

Month.	American granulated, "H. and E."		Dutch crushed, superior.		Dutch crushed, No. 1.		Austrian crushed.	
	Highest, c. f. i., per cwt.	Lowest, c. f. i., per cwt.	Highest, f. o. b., per cwt.	Lowest, f. o. b., per cwt.	Highest, f. o. b., per cwt.	Lowest, f. o. b., per cwt.	Highest, f. o. b., per cwt.	Lowest, f. o. b., per cwt.
1886.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January	19 9	18 4½	19 6	18 6	19 3	18 0	18 3	17 4½
February	18 4½	17 1½	18 3	17 0	18 0	16 9	17 3	16 0
March	17 6	16 6	17 6	16 9	17 0	16 3	16 3	15 1½
April	19 3	16 7½	17 9	16 9	17 3	16 4½	16 0	14 9
May	19 0	17 1½	17 6	16 1½	17 0	15 9	15 9	15 0
June	17 0	16 9	16 9	15 9	15 6	14 6	15 0	14 3
July	16 10½	16 3	16 4½	15 9	16 0	15 3	15 3	14 7½
August	16 3	16 0	16 1½	15 6	15 9	15 0	15 1½	14 4½
September	16 3	15 10½	16 3	15 4½	15 9	15 0	14 10½	14 6
October	16 1½	15 10½	15 10½	15 0	15 6	14 6	14 3	13 6
November	17 0	16 0	15 4½	14 9	14 9	14 3	14 3	13 3
December	16 9	15 0	15 4½	14 9	14 9	14 3	14 4½	13 9

DOMINION OF CANADA

PROVINCE OF NOVA SCOTIA

HALIFAX.

Report of Consul-General Phelan.

AGRICULTURE.

The year 1886 was a most remarkable year for fine weather, the only drawback being serious droughts in June and July and again in October. The first of these completely dried up the pastures and decreased the hay crop 10 per cent. below the average. The weather has greatly changed in Nova Scotia; the summers are lengthening, and the winters much shorter. In 1886 considerable plowing was done early in April. The season as a whole has been most favorable to agriculture, and, with the exception of hay, all kinds of crops grown here have produced abundantly. Potatoes, as well as all other roots and vegetables, have been most prolific. The fruit crop was 20 per cent. in excess of any previous year, and will continue to increase yearly as the large number of new orchards become mature. Very little wheat is raised in Nova Scotia, Western flour being so cheap that it does not pay to plant it. In some parts of the province the yield of oats exceeded the average crop by 10 per cent., and in portions of the Annapolis Valley produced 60 bushels to the acre.

APPLE CROP.

The apple crop has been unprecedentedly large, and the export to England has been larger than ever before. Between 30,000 and 40,000 barrels of Gravensteins were purchased by Americans and shipped to Boston and New York. A quantity of Nova Scotia apples was shipped to England via Boston, it being found more profitable to ship them in bond from Annapolis to Boston, thence to Liverpool and London, than to Halifax by rail and thence by steamer to England. The value of this year's crop is estimated at $600,000.

LIVE STOCK.

There is a steady improvement in the quality of the live stock raised in the province. A great many thoroughbreds have been imported of late years. The production of young cattle is greatly in excess of the demand, and when sold realize very little, if anything, above their cost. The only outlets for provincial cattle are Newfoundland and England; the markets of the former are very limited, and the competition with cattle from the Western States in the latter almost closes that market against Nova Scotia cattle, as freight and insurance from Halifax are largely in excess of the rates from Boston or New York.

NOVA SCOTIA FLOUR SUPPLY.

Owing to the destruction of grain by weevil, Nova Scotia has not for the last quarter of a century attempted to produce her own flour. Previous to 1877 nearly 400,000 barrels were imported yearly from

Portland and Boston duty free. In 1877 the Intercolonial Railway was opened up through to Quebec, and large quantities of flour began to come in from the province of Ontario. In 1879 the "national policy" (protective tariff) was adopted, and a duty of 50 cents per barrel placed on American flour, the object being to exclude it from this market. This had the effect of giving the upper provinces control of the flour markets of the lower provinces, but the freight on the railroads was so high that large quantities, probably one-half the total, were shipped in bond from Ontario over American roads to Boston, thence to Nova Scotia. A few months ago strong representations were made to the Canadian minister of railroads which induced him to grant a rebate on flour brought in certain quantities by the Intercolonial Railway from the upper provinces, so as to reduce the freight to a fraction below that via Boston and Portland. The result has been that seven-eighths of the flour trade of this province have been directed from American channels and now brought by rail direct. The total quantity of flour and meal brought from the upper to the lower provinces this year by rail was about 1,100,000 barrels.

SUGAR REFINERIES.

In my last annual report I said, "Owing to overproduction and excessive freight on railroads, the outlook for the maritime refineries is very gloomy, and unless a speedy change comes they will be compelled to shut down." The prediction was more than fulfilled. The refinery on the Northwest Arm has been closed two years, with no probability of its being reopened. The Nova Scotia Refinery sank $500,000, and closed nearly a year ago. Its original stockholders lost their stock and the refinery passed into the hands of a new company for a comparatively small sum. They reopened six months ago and have since worked it at a capacity in keeping with the demands. It employs about one hundred hands. The Halifax Refinery, on the Dartmouth side of the harbor, built two years ago at a cost of $750,000 and equipped to produce five hundred barrels of sugar daily, has also closed, and is a total loss to its proprietors. This, with the largely increased value of the raw sugar on hand, has been beneficial to the three other refineries in Canada, and now it is said they are doing a profitable business.

THE MINES.

The yield of gold in 1886 is slightly in excess of that of 1885, and will aggregate about twenty-one thousand ounces, valued at $420,000. A great deal of prospecting has been done and many discoveries of copper, iron, mica, plumbago, and manganese were made. A very rich deposit of copper and iron near North Sydney has just been disposed of to an American and English syndicate for $250,000. The output of coal was about 10 per cent. in excess of that of 1885. Of the output about 45,000 tons were shipped from Cape Breton to the United States, the largest part of the balance being shipped to Quebec, but the prices were ruinously low. One company, in filling a contract, shipped 30,000 tons to Montreal, and after paying freight charges realized but $1 per ton. Three large mining properties at Pictou, in which American capital is largely invested, have been amalgamated.

SHIPPING OF NOVA SCOTIA.

The shipping of Nova Scotia continues to show a steady decline. During the past year 134 vessels of 25,025 tons were added to the registry, while the names of 193 vessels of 38,876 tons were erased therefrom, leaving 2,913 vessels of 527,037 tons on the registry of the province, a net loss of 59 vessels of 13,818 tons. During the year 1886, 4,002 vessels arrived at Halifax; of these 892 were from foreign countries, and 3,110 coastwise. Of the foreign arrivals 528 were steamers.

TRADE.

More than one-half the exports of Nova Scotia is fish and its produce. All other industries are influenced by the fish markets. This year the fisheries have not been profitable and the exports and imports show a considerable decline from 1885. The following are the total exports and imports of Nova Scotia for the years 1885 and 1886:

Years.	Exports to all countries.	Imports from all countries.
1885	$8,782,820	$8,389,916
1886	7,891,194	8,065,666
Decrease	891,726	324,250

Fall mackerel were exceptionally fine and brought good prices, raising the average to nearly $6 per barrel. The catch was about the same as 1885, but short of other years. The United States is the principal market for pickled fish, as the West Indies are for dry cod. The trade with the latter, in consequence of the failure of the sugar crop, has fallen off more than one-half. This trade consisted in the exchange of fish for sugar, and the value of the imports at the port of Halifax from the West Indies represented the value of the fish exported to the latter from the former. The following official returns will show the falling off of this trade.

Imports from the West Indies at the port of Halifax for the years named:

1883	$1,977,885
1884	1,441,882
1885	1,029,643
1886	859,312

As every dollar of the above represents the same value of fish exported from Halifax to the West Indies in each year, the falling off has been in the same proportion. The loss of this trade has been so severely felt that the Canadian Government sent a commissioner to the West Indies to learn the cause of its decline, and to make such recommendations looking to its revival as he thought best. There is another serious loss to the trade of Nova Scotia, which, if not as great as that of the West Indies, is more general—that is the trade of American fishermen. The Canadian Government has declared it to be unlawful for American fishermen to purchase their supplies from Nova Scotia merchants, and has also declared it unlawful for American fishermen to land their fish in Nova Scotia for transshipment to the United States. It is stated that

the interference of the Canadian Government with trade has entailed a loss to Nova Scotia of over a half million dollars.

The following, taken from Fisheries-Inspector Bertram's report, may explain the motive of the Government:

Another circumstance which has vastly enhanced the use of our shore fisheries to the fishermen of the United States is the greatly enlarged facilities of transit of freight from the western ports of this island to ports of the United States, added in the last few years. These facilities are, first, the Eastern Extension Railway, terminating eastward in Port Mulgrave, on the Strait of Canso, and connecting by the Intercolonial Railway with United States railways; second, the Boston, Halifax, and Prince Edward Island Steamship Line, calling weekly at Port Hawkesbury, on the Cape Breton side of the Strait of Canso. Before the existence of these facilities for freighting from Cape Breton Island to the west and south, fishing vessels fitted out from a United States port, after having obtained a cargo on these shores, had to return home to deliver it, thus causing a loss of time to vessel and crew of from three to four weeks. During good fishing time this was a serious drawback on the aggregate of the season's catch of fish; then in the case of the fall mackerel fishing, United States vessels engaging in it could not, as a rule, make more than one return fare in the season to their ports of outfit. Cases in which a vessel was able to return to the fishing-grounds and secure a second cargo in the autumn season were but very few, and regarded as extraordinary good luck. This disadvantage of having to return home with cargo has now disappeared by new channels of freight transit above referred to. Now, a United States vessel fishing on Cape Breton shores, whenever she secures a cargo, and a portion of the fishing season is yet to elapse, instead of making the long voyage home as formerly, runs either to Port Mulgrave and transfers her cargo to the railway, or enters Port Hawkesbury and freights her cargo home by the steamship line above named. By this method these vessels remain continuously on the fishing-grounds for the whole season through, and double or triple, according to the abundance of fish on the shores, the yearly aggregate catch of seasons previous to the existence of the facilities for transshipment. Of course this transfer to steamship or railway takes place only in the case of barreled fish. Fish salted on board ship in bulk has to be carried home without transfer.

In the fishing season of 1885 there were transshipped from United States fishing vessels by steamers from Port Hawkesbury, 10,340 barrels of mackerel and 40 barrels of herring.

The following was carried to United States ports during the fishing season of 1885, over the Intercolonial Railway, being such as was transferred from United States fishing vessels to the railway at Port Mulgrave station:

	Barrels.
Boston	4,900
Gloucester	5,553
Portland	725
Total	11,178

Equal to 140 car-loads, or 2,235,600 pounds.

HALIFAX.

The following statement will show the declared value of the exports from Halifax to the United States during the four quarters of the year 1886, and the totals compared with those of 1885:

Articles.	Quarters ending—				Total.
	March 31, 1886.	June 30, 1886.	September 30, 1886.	December 31, 1886.	
Ale and porter	.....	$182 50	.....	$299 95	$482 45
Apparatus, electric	.....	.....	.....	200 00	200 00
Animals	.....	922 50	$605 50	477 50	2,005 50
Books	.....	.....	1,000 00	.....	1,000 00
Bones	.....	.....	.....	229 71	229 71
Barrels returned	$1,351 70	2,001 68	429 00	1,309 55	5,097 93
Berries	.....	331 50	303 13	4,395 64	5,030 27
Calf-skins	447 24	2,068 35	1,921 50	437 00	5,474 19
Cotton:					
Cloth	455 71	.....	.....	.....	455 71
Waste	1,067 21	662 87	1,265 03	677 75	3,672 86
Coffee	.....	.....	.....	1,371 17	1,371 13
Coal	.....	2,515 95	.....	.....	2,515 95
Eggs	479 70	.....	169 43	528 70	1,177 83
Emigrant effects	992 00	5,082 00	1,718 00	1,995 00	9,787 00
Furs, raw	.....	1,230 15	700 00	.....	1,930 15
Fish:					
Canned	3,084 50	22,479 10	45,966 90	14,288 55	85,819 05
Dry	69,297 71	66,076 24	61,880 23	90,092 79	288,246 05
Fresh	10,653 32	4,578 83	8,753 33	3,357 23	27,372 21
Mackerel, pickled	57,055 69	7,257 29	45,988 42	142,893 52	253,199 92
Trout	107 83	.....	222 75	.....	330 58
Salmon	4,581 00	.....	17,270 30	.....	21,851 30
Herring	13,362 15	181 84	9,128 25	.....	22,672 24
Alewives	998 40	.....	3,276 20	.....	4,274 60
Sounds	388 86	.....	2,453 94	2,127 27	4,969 57
Glue stock	.....	289 50	.....	.....	289 50
Hair, cattle	.....	243 29	.....	.....	243 29
Laths	.....	3,153 25	4,785 00	.....	7,938 25
Lumber	.....	769 25	733 48	5,420 60	6,923 33
Molasses	.....	2,490 75	177 84	2,782 64	5,451 23
Meat, fresh	.....	.....	.....	2,379 95	2,379 95
Old junk	2,896 92	3,413 14	2,559 22	2,473 27	11,342 55
Ore (manganese)	.....	.....	.....	528 80	528 80
Potatoes	11,953 88	1,989 97	.....	4,200 35	18,143 20
Slats	2,055 73	466 77	1,773 50	2,361 50	6,657 40
Skates	.....	.....	.....	215 43	215 43
Specimens (Arctic)	.....	.....	.....	500 00	500 00
Twine	.....	3,625 50	.....	.....	3,625 50
Wood-pulp	.....	710 00	819 00	2,424 00	3,953 00
Sundries	1,864 54	4,970 99	7,173 24	2,623 99	16,632 76
Total, 1886	183,092 39	139,202 61	221,088 19	290,628 86	833,977 00
Total, 1885	287,763 21	134,334 52	206,155 26	220,731 00	843,983 00
Increase	.....	4,868 07	14,927 93	69,867 24	.....
Decrease	104,670 82	.....	.....	.....	18,006 00

The above embraces only goods exported to the United States for entry and represented by invoices presented at this consulate-general for legalization, and not exports for transshipment.

The following will show the total exports and imports from Halifax to the United States and all other countries for the year 1886:

Whither.	Exports.	Imports.
The United States	$1,492,115	$1,256,756
Other countries	2,391,599	4,523,674
Total for 1886	3,883,714	5,780,430
Total for 1885	4,927,634	6,154,107
Decrease	*1,043,920	373,677

* Taking from this the estimated value of grain from Ontario via Intercolonial Railroad, included in Halifax exports, the net decrease will be $374,088.

HALIFAX AS A WINTER PORT.

Halifax is growing in importance as an inlet and outlet for Canadian commerce. In 1886 over 500,000 bushels of grain were received at Halifax from the province of Ontario for shipment to Europe. A great deal of sugar is being landed here this winter for shipment to Montreal and Quebec via the Intercolonial Railway. A short-line railway is being constructed across the State of Maine to connect with the Intercolonial near Moncton, New Brunswick. This will shorten the distance between Halifax and Montreal by over 200 miles. It is expected when this is completed that a large portion of the freight of the west will come over it to Halifax, and shipped from there to its destination. It is further proposed to build a road from Oxford on the Intercolonial along the shores of the Strait of Northumberland to New Glasgow, Nova Scotia, connecting with the road to the Strait of Canso, thence by the proposed road to Sydney and Louisburg, making the latter the eastern terminus of the Intercolonial Railway for the mail and passengers, and the nearest point to Europe. This is intended to confine Canadian exports and imports to Canadian ports. It is doubtful if they can overcome the difficulties of crossing the Strait of Canso and the Narrows in winter, and in spring the drift-ice, to say nothing of the inclemency of a Nova Scotia winter.

THE COTTON INDUSTRY.

There has been a material improvement in the cotton industry of the maritime provinces during 1886, showing an increase of fully 30 per cent. in the capacity and production over that of 1885. From reliable statistics gathered for the Maritime Mills I find that the aggregate capacity and production at the present time are as follows:

Number of spindles	106,600
Number of looms	2,105
Yards manufactured weekly	485,000
Yards manufactured yearly	24,250,000
Pounds of cloth and yarn manufactured weekly	100,500
Pounds of cloth and yarn manufactured yearly	8,000,000
Bales of cotton consumed yearly	18,000
Annual value of products	$2,110,000
Hands employed	2,030
Wages paid weekly	$10,400

LUMBER TRADE.

The shipment of lumber from Nova Scotia shows a marked increase over 1885, the details being:

Ports.	Vessels.	Tonnage.	Deals.
			Feet.
Guysborough	3	1,058	.....
Shelburne	5	1,553	1,455,314
Liscomb	1	391	374,550
Pictou	7	3,867	1,450,932
Parrsboro	53	34,039	29,345,000
Annapolis	3	1,957	1,656,000
Yarmouth	5	3,131	2,847,800
Amherst	30	16,709	15,190,560
Weymouth	2	741	590,168
Halifax	44	21,566	19,606,721
Sheet Harbor	18	7,514	6,831,000
Ship Harbor	6	2,878	2,617,000
Margaret's Bay	9	4,004	3,640,000
Port Medway	4	1,886	1,675,080
Total	190	101,304	87,280,125

There were 4,933 tons of birch timber shipped: Guysborough, 1,366 tons; Pictou, 2,812 tons; Weymouth, 215 tons; Halifax, 483 tons, and Margaret's Bay, 47 tons.

The following will show the shipment of deals from Nova Scotia to transatlantic ports for the years named:

	Superficial feet.
1882	85,752,000
1883	79,918,000
1884	69,159,000
1885	79,647,765
1886	87,280,125

The following will show the exports and imports of each port in the province of Nova Scotia for the year 1886:

Port.	Exports.		Imports.	
	United States.	Other countries.	United States.	Other countries.
Amherst	$29,380	$198,348	$40,240	$27,360
Annapolis	91,671	83,593	40,649	10,644
Antigonish	12,414	82,416	10,381	48,509
Arichat	8,178	42,868	3,488	7,622
Baddeck	6,500	65,200	2,500	4,035
Barrington	62,178	9,588	17,025	.....
Bridgetown	15,000	15,000	13,000	.....
Cornwallis	.....	176,960	50,000	.....
Digby	100,000	27,000	30,000	10,000
Guysborough	50,000	19,684	6,000	524
Halifax	1,492,115	2,391,599	1,256,756	4,523,674
Liverpool	15,018	59,089	36,650	1,219
Lockeport	18,885	253,115	446,536	28,848
Londonderry	1,985	4,236	18,269	40,533
Lunenburg	53,662	666,517	81,034	26,913
Margaretville	6,347	.....	4,096	.....
North Sydney	4,500	112,000	22,000	51,000
Parrsboro	.....	273,757	16,000	18,493
Pictou	77,915	46,369	58,608	48,128
Port Hawkesbury	86,740	99,209	12,168	.....
Port Hood	.....	4,288	435	284
Port Medway	42,853	32,459	1,880	407
Shelburne	11,873	20,000	15,000	1,875
Sydney	80,433	137,418	22,723	1,677
Truro	5,000	1,110	50,000	201,300
Windsor	141,200	.....	124,648	23,273
Weymouth	88,898	22,005	30,714	15,815
Yarmouth	338,942	226,240	310,192	153,635

RECAPITULATION.

From and to—	Exports.	Imports.
United States	$2,831,186	$2,700,362
Other countries	5,060,008	5,365,304
1886	7,891,194	8,065,666
1885	8,782,820	8,389,916
1884	9,183,346	9,658,104

FISHERIES OF THE MARITIME PROVINCES.

Nova Scotia.—From the most reliable information attainable the yield of the fisheries for the year just closed will show a small increase in the catch of mackerel and a large decrease in the catch of herring and salmon, the yield of other kinds of fish being about the same as 1885. The average value for 1886 is as follows: Mackerel, a fraction under $6 per barrel;

herring, about $3 per barrel; cod, $2.25 per cwt., and other kinds of fish will show a small decrease from 1885. The total value will be about $5,000,000. If the system of estimates and values adopted by the Canadian Government for fish will be applied to this catch, it will be valued, no doubt, at $8,500,000. A very large portion of the mackerel was caught in the North Bay. No great quantities appeared on the Nova Scotia coast inside the 3-mile limits until early in November, when two schools struck in and good hauls were made by the local fishermen. I may say here that the Nova Scotia fishermen have had the exclusive control of their coast fisheries for the last year, yet the catch of mackerel within the protected waters did not reach 20,000 barrels. There has been a falling off of 50 vessels from the fishing fleet of 1885, but an increase in the number of boats is claimed. It must be remembered, however, that under the Canadian system of preparing fisheries statistics every person fishing for table use is enumerated, together with his boat, as engaged in the fisheries. In this way counties not engaged in the fisheries as an industry are credited with large quantities of fish, valued at many thousand dollars, not one of which enters into commerce.

The prosecution of the spring herring fisheries, heretofore so profitable to the fishermen of Eastern Nova Scotia, has been almost entirely abandoned, owing to the interference of the Canadian Government. Spring herring are nearly worthless except for bait. Previous to 1886 large quantities were caught and sold to American fishermen for bait at good prices and for cash. The American fishermen were their only cash customers, as the truck system prevails here for fishermen. The fish they catch are mostly negotiated in advance to the owner of the fish stage, who pays in kind. Most large fish stages have a store as an appendix, where the fishermen must go and take their pay in goods, and are seldom out of debt. The arrival of the American fishing fleet was hailed with delight by all classes, as the American dollar exchanged for bait soon found its way into and stimulated trade. Under the plea of protecting the fisheries the Canadian Government prohibited American fishing vessels from entering Canadian waters, which deprived these poor people of their only market for spring herring; consequently they had to abandon this fishery.

The following will show about the quantities of the leading commercial fish caught by the Nova Scotia fishermen for 1886:

Mackerel	barrels..	105,000
Herring	do....	160,000
Cod	quintals..	1,000,000
Halibut	pounds..	900,000
Lobsters	do....	6,500,000
Fish-oil	gallons..	450,000

New Brunswick.—It is very difficult to get a reliable estimate of the yield of New Brunswick fisheries. The fish statistics of the province are very unreliable, and largely in excess of the actual quantity or value. The chief fisheries are herring for sardines, salmon, lobsters, and smelts. The returns for 1886 will show an increase of the catch of smelts and sardines (herring). Fully 80 per cent. of the produce of the fisheries of this province is exported to the United States, as shown by the trade report published last year, as follows:

To the United States	$883,575
To other countries	237,923
Total export of fish	1,111,498

The value of the catch of 1886 is estimated by competent persons at $2,100,000. Official values and estimates will, no doubt, swell the amount to over $4,000,000.

Prince Edward Island.—The yield of this province will not reach within $200,000 of the value of the catch of 1885. The demand for bait being confined to the island fishermen, only about 35,000 barrels of spring herring were caught. 30,000 of which were used for bait and about 5,000 consumed as food. Cod were very scarce and show a large deficit. Mackerel show an increase of about 5,000 barrels. The lobster fisheries show a falling off of 772,409 cans. Only 3,616,784 cans were put up on the island in 1886; it took 6½ lobsters to fill a one-pound can—the yield representing a destruction of over 23,500,000 lobsters. No fishery can stand such waste. The oyster fisheries will show an increase of about 3,000 barrels. The value of the catch of Prince Edward Island is estimated at nearly $700,000; the official value will be about $1,100,000.

M. H. PHELAN,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Halifax, N. S., January 17, 1887.

Comparative statement (by provinces) showing the total value of exports, the total value of goods imported and entered for consumption, and the amount of duties collected in the Dominion of Canada, during the fiscal years ending, respectively, on the 30th June, 1883, 1884, *and* 1885.

Provinces.	Total exports.	Total imports.	Entered for consumption.	Duty.
Fiscal year ending June 30, 1883.				
Ontario	$32, 890, 019	$44, 066, 445	$44, 452, 804	$7, 064, 527 15
Quebec	42, 642, 986	55, 969, 871	47. 754, 996	9, 250, 349 42
Nova Scotia	9, 820, 332	10, 033, 929	9, 042, 017	1, 833, 641 31
New Brunswick	7, 520, 107	6, 972, 121	7, 265, 238	1, 514, 897 41
Manitoba	510, 469	9, 326, 324	9, 312, 053	1, 764, 805 72
British Columbia	3, 383, 342	3, 937, 536	3, 866, 856	908, 962 54
Prince Edward Island	1, 318, 549	682, 170	717, 429	166, 988 42
Northwest Territories	.....	725, 626	725, 626	68, 137 00
Totals	98, 085, 804	132, 254, 022	123, 137, 019	23, 172, 308 97
Fiscal year ending June 30, 1884.				
Ontario	26, 891, 017	41, 967, 215	40, 332, 245	6, 979, 026 22
Quebec	42, 029, 878	49, 122, 472	43, 026, 172	8, 134, 639 66
Nova Scotia	9, 599, 356	9, 653, 104	9, 183, 346	1, 907, 285 69
New Brunswick	7, 753, 072	6, 467, 888	6, 513, 924	1, 354, 886 42
Manitoba	722, 730	3, 734, 573	3, 768, 851	664, 037 61
British Columbia	3, 100, 404	4, 142, 286	4, 040, 335	884, 076 21
Prince Edward Island	1, 810, 039	822, 766	829, 032	170, 868 40
Northwest Territories	.....	486, 739	486, 739	70, 148 16
Totals	91, 406, 496	116, 397, 043	108, 180, 644	20, 164, 963 37
Fiscal year ending June 30, 1885.				
Ontario	28, 434, 731	39, 828, 083	39, 285, 143	6, 535, 309 32
Quebec	39, 604, 451	46, 733, 039	41, 156, 263	7, 789, 980 81
Nova Scotia	8, 894, 085	8, 418, 826	8, 192, 381	1, 751, 637 22
New Brunswick	6, 489, 293	5, 972, 836	6, 124, 264	1, 314, 981 46
Manitoba	1, 083, 528	2, 728, 868	2, 759, 870	569, 958 73
British Columbia	3, 237, 804	4, 089, 492	4, 023, 452	966, 143 64
Prince Edward Island	1, 494, 469	780, 141	778, 444	187, 642 80
Northwest Territories	.....	390, 202	390, 202	17, 905 01
Totals	89, 238, 361	108, 941, 486	102, 710, 019	19, 133, 558 99

Abstract of the total value of goods exported from the Dominion of Canada to each country during the fiscal year ending June 30, 1885.

Countries.	The mine.		The fisheries.		The forest.		Animals and their produce.	
	Produce.	Not produce.	Produce.	Not produce.	Produce.	Not produce.	Produce.	Not produce.
Great Britain	$485,408	$46,867	$1,543,014		$9,577,581	$295,972	$17,979,895	$758,541
United States	2,898,518	142,385	3,560,731	15,118	9,355,736	1,078,013	6,789,562	320,529
France	311		32,350		252,199		320	
Germany	32,870		1,948		748		78,333	
Holland					16,790			
Belgium	830				18,242	4,000	11,600	
Spain			7,910		123,841			
Portugal			125,416		32,917	3,245		
Italy			132,507		8,065		178	
Denmark	930							
Sweden	224							
China					5,621		220	
Japan					18,253			
British West Indies	16,077		1,152,868		206,494	1,555	15,097	94
Spanish West Indies	7,277	125	718,956		51,797		57	
French West Indies			130,235		5,150			
Danish West Indies			38,260		142		3,082	6,346
Hayti			2,907		4,008			
British Guiana	1,244		97,438		61,677		1,422	50
French Guiana					490			
Dutch Guiana					5,496			
Brazil			293,022		16,318			
Central American States	868		15		1,372		110	
Chili					13,098			
Peru					20,991			
Argentine Republic	432		2,030		660,686			
Uruguay			595	588	144,627			
United States of Colombia					8,338			
Mexico							2,710	
Newfoundland	155,251	7,946	14,946	606	100,879		399,320	81,048
St. Pierre	17,337		1,014		30,115		55,198	164
Sandwich Islands	19,440		700					
Australia	120	110	81,193		187,011			118
Gibraltar			11,740		17,380			
Madeira			10,203		10,178			
British Africa					28,049	812		
Egypt	2,400							
French possessions in Africa					5,419			
Totals	3,639,537	196,933	7,960,001	16,312	20,989,708	1,383,597	25,337,104	1,166,890

Abstract of the total value of goods exported from the Dominion of Canada to each country during the fiscal year ending June 30, 1885—Continued.

Countries.	Agricultural products.		Manufactures.		Miscellaneous articles.		Totals, all articles.	
	Produce.	Not produce.	Produce.	Not produce.	Produce.	Not produce.	Produce.	Not produce.
Great Britain	$5,502,763	$4,208,247	$1,335,706	$71,863	$54,684	$11,950	$36,479,051	$3,392,940
United States	8,392,341	40,101	1,135,741	488,778	485,964	79,734	32,618,593	2,164,658
France	16,016	.....	2,113	.....	.....	.....	303,309	.....
Germany	107,965	.....	32,384	6,487	8,340	.....	257,588	6,487
Holland	7,304	.....	.....	.....	.....	.....	24,094	.....
Belgium	1,521	483	33,335	1,874	500	.....	66,028	6,357
Spain	.....	.....	911	.....	33	.....	132,625	.....
Portugal	188	2,135	1,924	857	.....	48	160,445	6,285
Italy	.....	.....	6,800	.....	.....	.....	147,550	.....
Turkey	.....	.....	34	.....	.....	.....	34	.....
Denmark	.....	.....	.....	.....	.....	.....	930	.....
Norway	.....	.....	83,372	.....	.....	.....	83,372	.....
Sweden	.....	.....	.....	.....	.....	.....	224	.....
China	.....	.....	131	572	.....	1,569	5,972	2,141
Japan	.....	.....	3,527	23	.....	2	21,780	25
British West Indies	94,873	474	35,430	4,286	5,519	1,033	1,526,358	7,442
Spanish West Indies	19,990	.....	4,048	530	.....	75	802,134	730
French West Indies	6,378	.....	8	.....	.....	.....	141,771	.....
Danish West Indies	1,375	.....	277	124	263	30	43,402	6,500
Hayti	31	.....	.....	.....	.....	.....	6,946	.....
British Guiana	36,666	.....	4,415	80	.....	.....	202,862	130
French Guiana	990	.....	.....	.....	.....	.....	1,480	.....
Dutch Guiana	.....	.....	.....	.....	.....	.....	5,496	.....
Brazil	.....	.....	1,572	.....	.....	.....	310,912	.....
Central American States	231	.....	44	143	.....	.....	2,640	143
Chili	.....	.....	21,409	.....	.....	.....	34,507	.....
Peru	.....	.....	207	.....	.....	.....	21,198	.....
Argentine Republic	.....	.....	38,951	103	84	.....	702,183	103
Uruguay	.....	.....	6,292	7	.....	.....	151,514	595
United States of Columbia	.....	.....	15,000	.....	.....	.....	23,338	.....
Mexico	.....	.....	1,395	.....	.....	.....	4,105	.....
British India	.....	.....	3,498	.....	.....	.....	3,498	.....
Newfoundland	317,486	346,388	204,887	29,753	6,164	6,294	1,196,933	472,035
St. Pierre	12,166	4,245	35,056	6,523	823	61	151,709	10,993
Sandwich Island	.....	.....	350	.....	.....	100	20,490	100
Australia	.....	.....	146,393	725	.....	217	414,717	1,170
New Zealand	.....	.....	19,900	.....	.....	.....	19,000	.....
Gibraltar	.....	.....	342	.....	.....	.....	29,462	.....
Madeira	.....	.....	.....	.....	.....	.....	20,381	.....
British Africa	.....	.....	69,949	.....	.....	.....	34,998	812
Egypt	.....	.....	.....	.....	.....	.....	2,400	.....
French possessions in Africa	.....	.....	.....	.....	.....	.....	5,419	.....
Totals	14,518,293	4,602,073	3,181,501	612,728	557,374	101,113	76,183,518	3,079,646

Coin and bullion exported to Great Britain	$5,714
Coin and bullion exported to United States	2,021,266
Estimated amount short returned at inland ports and exported to the United States	2,948,217
Total exports	89,238,361

Abstract of the value of goods imported entered for consumption into the Dominion of Canada from each country during the fiscal year ending June 30, 1885.

Countries whence imported.	Dutiable goods.	Free goods.	Total.	Duty collected.
Great Britain	$30,702,359	$10,704,418	$41,406,777	$7,617,249 45
United States	31,231,947	15,919,254	47,151,201	6,624,100 39
France	1,712,324	233,257	1,985,581	650,515 29
Germany	1,888,846	232,423	2,121,269	572,947 91
Holland	265,575	72,210	337,785	521,3.8 20
Belgium	396,529	82,731	479,260	121,660 61
Spain	342,707	6,508	349,215	154,680 24
Portugal	57,645	2,721	60,366	29,345 65
Switzerland	215,807	1,859	217,666	51,863 04
Austria	94,867	344	95,211	22,584 24
Italy	81,915	26,247	108,162	33,380 25
Turkey	161,330	7,479	168,809	27,693 75
Greece	92,679	54	92,733	18,562 21
Denmark	667	.....	667	174 40
Norway and Sweden	32,449	581	33,030	5,725 74
Russia	2,434	6,974	9,408	316 20
China	1,091,896	530,272	1,622.168	446,563 35
Japan	13,249	863,034	876,283	3,589 90
British West Indies	1,336,947	105,377	1,442,324	519,337 32
Spanish West Indies	1,688,882	3,521	1,696,403	804,118 12
French West Indies	6,682	13,129	19,811	3,054 19
Danish West Indies	553	4,975	5,528	188 62
Dutch West Indies	1,029	1,679	2,708	715 74
British Guiana	158,463	2,118	160,581	122,958 47
Brazil	1,060,259	86,019	1,146,278	528,731 02
Central American States	3,115	1,463	4,578	1,947 57
Chili	300	2,500	2.800	105 00
Mexico	3,635	3,793	7,428	1,906 60
Venezuela	.....	19,171	19,171	.....
British East Indies	211,141	12,174	223,315	37,330 70
Dutch East Indies	53,915	4,194	58,109	25,695 47
Mauritius	89,622	.....	89,622	43,268 31
Newfoundland	5,996	345,109	351,105	2,268 61
St. Pierre and Miquelon	1,779	2,767	4,546	725 94
Spanish possessions in Pacific Ocean	254,979	.....	254,979	122,387 51
Portuguese possessions in Africa	131	.....	131	73 60
Persia	239	.....	239	47 80
Sandwich Islands	672	150	822	100 80
Australia	1,010	1,221	2,231	188 10
Africa	5,044	149,875	154,919	703 24
New Zealand	.....	800	800	.....
Total	73,269,618	29,440,401	102,710,019	19,121,253 55

WINDSOR.

Report of Consul Young.

The Windsor consular district includes the counties of Hants, of which Windsor is the county seat and the principal town of the district; Kings, which embraces the town of Kentville, Wolfville, Canning, and other important villages, and Cumberland, with the exception of that portion lying on Northumberland Strait, Amherst being the county seat. Two consular agencies are established in each county, at the following places, viz:

Hants: Kempt and Walton, in the eastern part of the county, on the Basin of Minas, the chief exports therefrom to the United States being gypsum and manganese ore. Kings: Wolfville and Canning, exporting farm products, potatoes, apples, and horses; also some sawed lumber. Cumberland: Parrsboro and Port Joggins, exporting bituminous coal, and, to a large extent, logs for piles, lumber, laths, and fire-wood, and from the latter place, grindstones.

From Windsor the chief export is gypsum, and in some years potatoes and apples.

TRADE.

During the past season a considerable increase in the volume of trade has been apparent in this district. The crops have been up to the average, except hay, while of fruit, especially apples, the product has far exceeded that of any preceding year. The sale of apples, chiefly for shipment to New York and London, has put in circulation a considerable amount of money, which has been felt in all the channels of trade. The exemption of green fruit from duty in the United States has proved, in this instance at least, a benefit to both producers and consumers. It may be observed in passing that no proclamation "of the governor in council" has yet appeared abolishing the duty of 40 cents per barrel on apples imported from the United States, as the executive is authorized to do by section 6 of the Dominion customs act.

CREDITS.

There are but few mercantile houses in the town of Windsor that sell at wholesale, but such as supply the retail trade, including manufacturers of stoves and other castings, furniture of all kinds, leather, cotton goods, &c., give a credit of three months, and, in many instances, by dating paper ahead, nearly or quite four months. It is proper to say that mercantile business in this district, certainly in this town, is generally conducted on a sound basis, and the rating on the books of the agencies consequently high.

SHIPPING AND FREIGHTS.

Shipping may be reported as dull and freights low, but, although the business is apparently unremunerative yet, as I am told by extensive ship-owners, it pays as well as any investment of capital, and much better than in the State of Maine, where wooden vessels of a similar class are largely engaged in the carrying trade.

Gypsum or plaster of Paris (locally known as "plaster") and other products of this district are now exported to the United States chiefly in Canadian bottoms. During the last quarter of 1886 American vessels carried only 29 per cent. of the total shipments of gypsum.

Freights during the quarter may be quoted as follows: Plaster, to Boston, $1 to $1.15; to New York, Philadelphia, and Baltimore, $1.40 to $1.60; to Alexandria, $1.50 to $1.60; to Richmond, $1.60 per ton. Apples, to Boston, 25 cents; to New York, 30 cents per barrel. Potatoes, to Boston, 10 cents; to New York, 12 to 14 cents per bushel in bulk; in barrels the same as apples.

EXPORTS TO THE UNITED STATES.

As has already been stated, the chief export to the United States from Windsor is gypsum, and this has been the case for nearly or quite a century, exceeding even in value all other products, while, owing to its low price, it employs much more tonnage than all other exports in the whole district. It is needless to say that gypsum, costing only $1 per ton, requires far more tonnage to carry $10,000 worth than manganese ore at $72, apples at $20, or potatoes at $10 per ton.

The following statement shows the value of all declared exports from the consular district of Windsor, Nova Scotia, to the United States during each quarter of the year ended December 31, 1886:

Statement showing the value of declared exports from the consular district of Windsor, Nova Scotia, to the United States during the year ending December 31, 1886.

Articles.	Quarters ending—				Total for the year.
	March 31, 1886.	June 30, 1886.	September 30, 1886.	December 31, 1886.	
Animals—horses	$476	$3,697	$966	$1,365	$6,504
Articles made in United States and returned	.....	48	.....	103	151
Coal, bituminous	.....	22,656	2,674	1,338	26,668
Cotton waste	.....	1,242	.....	898	2,140
Eggs	.....	128	578	.....	706
Fruit, green—apples	.....	.....	.....	50,832	50,832
Grindstones	.....	2,125	3,454	3,605	9,184
Gypsum (or plaster of Paris), unground	.....	30,596	46,944	37,492	115,032
Gypsum (or plaster of Paris), ground	.....	482	.....	.....	482
Household goods of emigrants to the United States	550	795	340	240	1,925
Iron manufactures	.....	.....	.....	422	422
Manganese ore	650	5,199	7,032	5,642	18,523
Sand for molding	.....	.....	.....	310	310
Vegetables—potatoes	26,403	34,762	1,631	29,664	92,460
Wood and manufactures of:					
Fire wood	.....	1,556	1,906	338	3,800
Laths	.....	2,693	4,424	15,013	22,130
Lumber, sawed	.....	5,263	17,587	7,980	30,830
Piling (or logs for piles)	.....	32,337	26,271	9,629	68,237
Ships' knees	.....	1,501	.....	.....	1,501
Sundries	78	53	91	120	342
Total in 1886	28,157	145,133	113,898	164,991	452,179
Total in 1885	.....	.....	77,332	59,688	.....
Increase	.....	.....	36,566	105,303	.....

It will be observed that gypsum is exceeded in value by timber, lumber, and other manufactures of wood, the latter amounting to $126,498 and the former to $115,032, while potatoes, the product of one county reached $92,460, and apples in a single quarter to $50,832. An increase in the shipments of coal may be looked for in the early future, and also of manganese ore, so important an export as to deserve especial mention hereafter. Fruit, already referred to, and the agricultural and horticultural capabilities and products of this district will receive due consideration in a separate report.

IMPORTATIONS FROM THE UNITED STATES.

Anthracite coal is used to a considerable extent in and near Windsor, and is kept on sale by two large dealers. Refined petroleum, sulphuric acid, corn meal, flour to a limited extent, hardware, musical instruments, clocks and watches, glassware, fancy goods, raw cotton, pitch, pine and some white-oak timber for ship-building, cordage, cotton duck for sails, drugs and medicines, furniture to a limited extent, picture-frames, some cotton and woolen goods, school, scientific, and other books, some stationery, boots and shoes, india-rubber goods, and a variety of other articles are imported from the United States. There is no necessity for a consul attempting to introduce into this district particular lines of goods, for each trader or manufacturer who might sell or use certain kinds of manufactured articles knows better than any

consular officer where the goods he needs can be obtained to the best advantage. His proximity to the United States, especially to New England, enables him to obtain full information regarding the American market.

Hardware.—From Windsor dealers the information is obtained that only a part of the manufactures of iron under the general name of hardware is of United States production. More than one-half of what is designated "shelf-hardware," the whole of door-locks and a fair proportion of other locks and of hinges are made in the United States. Hand-saws are chiefly Disston's or other first-class make. Of table and pocket cutlery, part comes from England and the remainder from Germany, the latter country sharply competing with England in quality and underselling in price. Of ordinary hardware, hammers, screws, wire nails, also pumps, shovels, and spades, the chief supply comes from the province of Ontario, some from Montreal, cut nails and some other iron articles from Saint John and Saint Stephen, in New Brunswick; barbed wire for fencing comes from Ontario; stoves and many other articles of iron, including windlasses, capstans, winches, &c., all of standard quality, are made by the Windsor Foundry Company. Except in certain lines of goods and in novelties as they are presented, there appears to be no opening within and beyond this district for increased consumption of goods produced in the United States. And why? Is it because in excellence of manufacture, in style or design, the product of American mills and factories is inferior? Quite the contrary. In most respects they are superior, in all equal, to the manufactures of any other country. An inexpert myself, I submit the testimony of experts, of residents here, whose preferences are certainly in favor of home or Canadian-made articles.

Cordage.—A member of one of the two large ship-building firms and another large ship-builder and ship-owner in another county unite in the expressed opinion that manila rope made in the United States is superior to any made in Canada. "We buy from Halifax and Montreal," said one; "both make good rope, but not equal to American." The other, in reply to a question, said that the Halifax company makes good cordage, and the Montreal manufacturers profess to make it equal to the American, but do not. "In what consists the difference, as all must use the same kind of hemp?" was asked. "I scarcely know, but you can distinguish the American, even by the smell. It is softer, smoother, and more pliable. The captains greatly prefer it." It may be mentioned that ship-builders in the Dominion receive a drawback of three-fourths of the duty they had paid on imported cordage, and on sail-cloth and all imported articles used in building or fitting out ships the duty paid thereon is returned, except 5 per cent. of the declared value.

Agricultural implements.—In view of the agricultural capabilities of this part of Nova Scotia and of the extensive use of farm tools therein, my inquiries as to the comparative excellence of those manufactured in the United States and in Canada were extended and continuous. The president, the secretary, and several leading members of one of the agricultural societies of Hants County, separately given, expressed in the most emphatic manner their opinion that all kinds of tools, especially mowing and other haying tools, drills, and forks of American make are superior to those made in Ontario. An intelligent farmer of Falmouth, who has traveled extensively in Europe and the United States, testified as follows: "Agricultural implements made in the United States (except plows), especially mowers and other haying tools, forks, and hoes, are better than those made in Ontario." "Why or in what respect better?"

was asked. "Better because lighter and of better wood and other material, easier running-gear, more even, less friction, and therefore more durable." Another farmer, an officer of an agricultural society, gave similar testimony. A less intelligent man than either of the preceding, but a practical and most successful farmer, who at middle age is able to retire from the business, condensed his opinion in the following terse sentence: "All agricultural tools and implements made in the United States are, without exception, of superior quality to those of Canadian make." In the township of Windsor one experienced and intelligent farmer, and one only of the large number of whom inquiries were made, said he did not know but Canadian-made tools were as good as American.

From inquiries made by the consular agents the information was gained that in every county of this consular district the superiority of American-made farm tools is asserted. One agent, whose office is in a district of great fertility and where the sale of implements of husbandry is extensive, wrote: "Agricultural implements of all kinds manufactured in the United States are very much better than those of Canadian make, and this appears to be the unanimous opinion of the people here." The last inquiry made by me was of a dealer in Wolfville who sells mowers and other agricultural machines and tools of Canadian make. His testimony is clear and explicit, as follows: "American-made tools are decidedly better than the Canadian; whatever the Americans make is made well. The iron and steel parts of mowers and other tools are perfect, and the parts fit with mathematical accuracy, while in those of Ontario make the different parts of the machinery sometimes vary, and if this variance is only the one-hundredth part of an inch it causes friction, the machine consequently runs less easily and does not last so long as the American. The wooden parts of nearly all farm tools of American make are lighter and made of better wood."

In view of the acknowledged superiority of American-made agricultural tools, most kinds of hardware, and a variety of other articles, why are the imports from the United States into this province so limited in amount? The answer can be given in a single word, because of the *tariff*. The Canadian tariff imposes a duty of from 30 to 35 per cent. ad valorem on hardware and many other manufactured articles imported not only from foreign countries but from Great Britain and its dependencies without the Dominion.

Although owing to their superior quality the agricultural and other machines and tools made in the United States are as cheap at higher prices as those of Canadian make, yet as the first cost is from 25 to 35 per cent. higher this greater outlay at first limits the sale of American-made goods.

MANUFACTURING INDUSTRY.

Although there has been a considerable increase in the volume of manufacturing industry in Nova Scotia during recent years, yet few mills or factories have been established in this consular district except at Windsor. A cotton-mill producing gray cotton is running full time; a furniture factory finds ready sale for its chairs, chamber sets, office and other furniture; an extensive iron and stove foundry, already mentioned, is working to its full capacity and finding sale for its products not only in Nova Scotia but in the other provinces; a tannery making sole-leather of standard quality, one or more factories making doors and other building materials, comprise the principal manufacturing establishments in the town exclusive of ship-yards. In the agricultural

parts of the consular district there are barrel factories, saw and flour mills, tanneries, carding-mills, a few cheese factories, and one or two for evaporating fruit; in the township of Cornwallis two ax, one stove, and a number of barrel factories are reported; at Maitland there is an iron foundry; in some places phosphates or other fertilizers are produced, and at Hantsport and other places where ship-building is carried on there are industrial establishments allied to that industry. Boot and shoe, building-material, and other factories and mills and an iron foundry are in successful operation at Amherst, Cumberland County. These varied industries, important though they be, are outranked by the oldest and most important, that of

SHIP-BUILDING.

This is a large and important industry in this district, and was begun soon after its settlement by the English, about a century and a quarter ago. Vessels of small tonnage for the plaster and coasting trades and for fishing were built as required, and owing to the abundance and nearness of ship-timber and the low rates of wages the hulls, being iron fastened, were not costly. Sail cloth and cordage cost more than at present, but fore-and-aft and even topsail schooners took but a small quantity of canvas and duck for sails, and there was no superfluity of either standing or running rigging. This was before the introduction of chain cables, and those of hemp were not long enough to admit of anchorage in deep waters. As the masters were usually part owners, and as seamen's wages were low and the fare even in the cabins not luxurious, the vessels were run at a small expense; and I am told by residents who remember events that occurred sixty or seventy years ago that more money was made by small vessels in the plaster trade then than by those of much larger tonnage now.

The principal and probably the most successful firms in this province engaged in ship-building are in this district, and these grew from small beginnings. It is worthy of mention that Ezra Churchill & Sons, of Hantsport, and Bennett Smith & Sons, of Windsor, were not long since classed as the two most wealthy firms in the province in any business.

Hantsport, near the mouth of the Avon River, 7 miles below Windsor, and now a most enterprising village with more than one thousand inhabitants, consisted of about half a dozen houses fifty-five or sixty years ago, and then known as Halfway River, being at the mouth of a stream, so called, separating the townships of Falmouth and Horton. About that time Ezra Churchill came with little capital except youthful vigor, enterprise, and perseverance, bought a vessel or two on credit, was eminently successful, and subsequently engaged in ship-building, which business the firm of E. Churchill & Sons has continued up to and since the death of the senior partner. Successful in his own business, the electors of Falmouth sent Mr. Churchill for many years to attend to their business in the provincial legislature, and he was subsequently appointed senator for life in the Dominion Parliament.

At a comparatively recent period Mr. J. B. North settled at Hantsport, and is also a ship-builder and an extensive ship-owner.

The other large firm, Bennett Smith & Sons, of Windsor, was founded by the senior partner, now deceased, in 1838, in which year he built a brig of 300 tons, somewhat smaller than the last ship built by the firm, in 1886, which measures 1,774 tons. The business has grown to so large proportions that no less than thirty-two vessels of an aggregate tonnage of 27,212, were built by them before the close of the year 1883.

Mr. Smith's father, Mr. John Smith, was known in other parts of the county as well as in Windsor, as a skillful shipwright, and was frequently employed, some sixty or seventy years ago, to draft and superintend the building of vessels. He may therefore be properly considered the founder of this well-known firm.

LARGE SHIPS.

The vast increase in the size of vessels, and the great improvement in their finish, rig, sea-going qualities, and general adaptation to modern navigation that has taken place since the settlement of Hants County may be regarded by some scientists as illustrative of the evolution theory. From the little craft, the Harmony, of 35 tons burden, built in Falmouth more than a century ago, through all intermediate rigs and sizes to the great ship, the W. D. Lawrence, of nearly 2,600 tons, with all the modern improvements and appliances, evolution may be clearly traced and "the survival of the fittest" observed.

The largest ships built by the two leading firms ranged from about 1,400 to 1,868 tons register; these were exceeded in size by the ships above mentioned built at Maitland, Hants County, by Mr. W. D. Lawrence, recently deceased, and which measured considerably more than 2,500 tons, the largest sea-going vessel built in the British North American provinces, and, with a single exception, the largest sailing vessel ever built.

The following large ships were registered at Windsor during the year 1886, viz: One of 1,774 and one of 1,370 tons by Bennett Smith & Sons; one of 1,716 by the Eskasoni Company; one of 1,698 by E. Churchill & Sons; one of 1,664 by J. B. North, and one of 1,493 tons by William H. Mosher, an average of 1,619 tons, or more than forty-six times as large as the Harmony.

Ship-building is also carried on at Avondale and Maitland in Hants County, Kingsport, Canning, Scot's Bay, and other parts of Cornwallis: at Spencer's Island, and other places in Cumberland County. The Big Raft at Port Joggins, which is to be rebuilt in order to be successfully launched, is not properly classed as a ship, and although not the first of its kind, yet, owing to its peculiar construction and great size, will receive special mention hereafter.

During the past year the ship-building interest has not been very prosperous, the new tonnage in Hants County amounting to only 12,614 tons. The total shipping registered at the port of Windsor consists of 189 vessels of 124,048 tons, the largest tonnage of any port in the province, outranking Yarmouth slightly and Halifax largely. Including Maitland, the total registered shipping of Hants County on the 31st December, 1886, was 232 vessels of 172,816 tons. By adding the tonnage registered at the ports of Parrsboro and Amherst, in Cumberland County, the total shipping registered in this consular district aggregates 201,268 tons. More than 80,000 tons of the shipping registered in Hants County is owned or controlled by eight individuals or firms.

COST OF BUILDING SHIPS.

The cost of building three-masted schooners of from 400 to 500 tons is about $40 per ton, copper-fastened and completely fitted for sea. Messrs. Bennett Smith & Sons, of Windsor, have recently built one of 400 tons, the total cost of which was $18,000, or nearly $41 per ton. Square-rigged vessels of larger size can be built at a less cost per ton.

For example, ships and barks of over 900 tons, copper-fastened, with a full suit of and some extra sails, having all the modern improvements in windlasses, capstans, winches, &c., to rate thirteen years at French Lloyds, can be built here at from $34 to $37 per ton, and $1 per ton additional for metal sheathing.

Sails cost considerably less here than in the United States, although the sail cloth is obtained therefrom and a net duty of 5 per cent. ad valorem paid. The reduction is in the cost of labor. The total cost of a suit of sails ready to bend does not exceed 32 cents per yard, while in New York the same ship-owners have paid 40 cents per yard. The best cotton duck of the various numbers used for the sails of a large ship costs here not exceeding an average of 20½ cents per yard, and the making and furnishing everything required from 11 to 11½ cents per yard. Sail-making where everything is found costs from 5 to 6 cents per yard.

For this and other information I am indebted to Mr. C. R. Burgess, an extensive ship-builder of Wolfville, whose ship-yard is in Cornwallis, and who owns or controls eight ships, aggregating 11,472 tons.

WAGES IN SHIP-YARDS.

For the following statement showing the average rates of wages paid in the ship-yards of Windsor and vicinity, and for other information relative to ship-building, I am indebted to the Messrs. Smith:

Occupation.	Wages per day.	Occupation.	Wages per day.
Shipwrights	$1 50	Blacksmiths	$2 00
Helpers	1 00	Helpers	1 25
Ship-joiners	1 75	Riggers	2 25
Calkers	2 25	Helpers	1 25
Helpers	1 25	Unskilled laborers	1 00

MINERAL RESOURCES.

I have already referred to the leading articles of export from this district, present and prospective, and again refer to the subsurface wealth under the above general designation.

Gypsum, or plaster of Paris (sulphate of lime).—Soon after the settlement of these counties, chiefly by emigrants from the older colonies, the large deposits of gypsum were discovered in the townships of Windsor, Falmouth, Newport, and what is now Kempt, and these deposits now seem inexhaustible. This gypsum was found to be valuable also for fertilizing purposes, especially in the States of Maryland and Virginia, and the demand was supplied by small vessels that carried it to Eastport and other towns in Maine, discharging their cargoes into American vessels of large size while afloat in the harbors. (This was before the ports in this district were open to American vessels or United States ports open to vessels from here.)

To show the smallness of vessels in this trade a century ago, as compared with those now employed, it may be mentioned that the first vessel known to have been built for this trade was the Harmony, already mentioned—so small that she was hauled by oxen from the timber land on which she was built, some 2 miles, to the Avon River. This pioneer in the trade carried 35 tons of plaster; and the last cargo that left Windsor for the United States, December 15, 1886, was certified

as of 1,120 tons, equal in weight to thirty-two cargoes of the Harmony. In former years, and until the bridge across the Avon just above Windsor was built—about fifty years ago—vessels carrying 150 tons or less sailed up the Avon and were loaded in some of the creeks in close proximity to plaster quarries, which, owing to obstructions to navigation, are now valueless. The size of the fifty cargoes shipped from Windsor during the December quarter of 1886 ranged from 215 to 1,120 tons, averaging 595 tons; of these fifty vessels, eleven carried the United States flag and cargoes averaging 724 tons each.

The total export of gypsum or plaster to the United States from Hants County during the past fifty-three years amounted to 3,267,365 tons, valued at $3,150,310.

Gypsum is shipped in a lump or unground state, and is exempt from duty in the United States, but the ground and calcined are subject to an ad valorem of 20 per cent.

Limestone is abundant throughout the district, but it is not exported to any considerable extent. Intelligent farmers lament that it is not more generally used as a fertilizer, as it is peculiarly suited to the clayey soils that predominate, and may be used to advantage on some light soils.

Grindstones.—The underlying rock of the coal formation of Cumberland County furnishes immense quantities of beautiful and compact gray and buff colored grindstones. These have for a long period of years been quarried at the Joggins quarries and shipped chiefly to the United States where the superior quality of these stones is well known. The value of these exports to the United States during the year 1886 was only $9,184.

Molding sand.—On land adjoining the town of Windsor and formerly belonging to the late Judge T. C. Haliburton (author of the Clockmaker, &c.), sand of a peculiarly smooth quality has been discovered, of which a few hundred tons were shipped to Boston during the past season. It is used in molding some kinds of brass castings, and for the purpose is unexcelled.

COAL MINES.

The only extensive coal formation in this consular district is in Cumberland County, which contains, it is asserted, some of the richest coal mines in the province; and although coal has been known for a long time to exist in certain localities, yet it has been unworked until recent years.

Spring Hill.—The mines at this place produce a soft coal which "the company claims is the best soft coal in America, particularly for locomotive and domestic use." It is brought by rail to Parrsboro, where vessels are loaded, and as the price at the place of shipment is only $1 per ton, the wonder is that the demand is not greater. I am advised by the company that "the output capacity of the mine is 2,000 tons per day; that the capacity for shipping at the wharf at Parrsboro is about 300 or 400 tons per day, that vessels carrying 800 tons and drawing 16 to 18 feet of water can load there, and that vessels are loaded in turn with very little delay. The coal is suitable for the manufacture of coal gas." From other sources the information is gained that the output at the Spring Hill mines in 1886 was 468,000 tons, an increase of 118,000 tons over that in the year 1885. The output in December, 1886, is reported at 43,026 tons, and the following statement made: "The collieries are worked to their utmost capacity and give employment to upwards of 1,100 men and boys. Preparations for an increase of business

this year (1887) are making." From the consular agency I learn that the shipments of coal by water from Parrsboro amounted, in 1886, to 40,508 gross tons, against 26,205 tons in 1885, and that 15,950 tons, valued at $1 per ton, were exported to the United States in the year just closed. This is a considerable increase from preceding years, the shipments to American ports being 3,104 tons in 1883, 4,562 tons in 1884, and only 2,843 tons in 1885. Owing to the working of these mines a great impetus has been given to that part of Cumberland County; a railway from Parrsboro to the mines, 27 miles, has been built, and the town of Spring Hill developed with surprising rapidity, now eclipsing in population and enterprise older and more conservative towns.

Joggins coal mines.—These mines are at no great distance from those at Spring Hill, but the shipping place is in another direction, at Port Joggins on Cumberland Basin. The Joggins Coal Mining Association has furnished a statement of the shipments of coal from the Joggins mines during the fifteen years from 1871 to 1885, inclusive, aggregating 234,558 gross tons, a yearly average of 15,637 tons. The consular agent at Port Joggins reports: "The output of coal has been rather larger the past season than for some years, and the company expects to increase the sale of coal when the Joggins Railway is completed to the Intercolonial, which it is expected will be early next summer."

In addition to the mines above mentioned the following are named: The Boston Coal Mining Company intends to open their mines at River Hebert, whence they can ship coal by vessels in summer, and at all times by the Joggins Railway, which will give the towns along the Intercolonial a supply of good coal. Mr. Patrick, a practical mining engineer, has a valuable coal claim close to the Joggins Railway which he is about to open up.

Miners' wages.—Coal miners at the Joggins mines are usually paid by the box or the cubic yard, and earn from $1.25 to $2 per day. At the Spring Hill mines surfacemen receive from $1 to $1.25 per day. Pitmen are paid 37½ cents per box, taking out from 4 to 5 boxes per day and earning from $1.50 to $1.87.

Manganese ore.—A quality superior to any found in the United States, it is believed, is found in large quantities in the townships of Walton and Maitland in the eastern part of Hants County. The shipments of this ore have been chiefly from Walton, where E. Churchill & Sons and others have valuable mines. A company has been recently formed to develop the manganese properties at or near "Moose Brook," where there are known to be valuable deposits. The relative prices will indicate the superior quality of the ore shipped from this county. In Pittsburgh, Pa., the quotations range from $10 to $15 per ton; at Walton the average declared value of this ore exported to the United States exceeds $72 per ton. The further development of these valuable deposits in Eastern Hants will be observed with interest, and a special report thereon will be made in the early future.

Other minerals.—Considerable interest has been excited by the discovery of antimony in Rawdon, Hants County, in which township there has recently been a small yield of gold.

EDWARD YOUNG,
Consul.

UNITED STATES CONSULATE,
Windsor, Nova Scotia, January 24, 1887.

PROVINCE OF ONTARIO.

CHATHAM.

Report of Commercial Agent Eddy.

Within the limits of this consular district the resources are chiefly agricultural. The soil is of great richness and of unusual depth. It is one of the finest grain-growing districts in Canada. Fall and spring wheat and all other cereals of the choicest quality are grown in lavish abundance. It is the only locality in Canada where corn and white beans are successfully grown. The soil is generally strong clay loam on the timber lands, and a black vegetable mold with clay subsoil on the prairies. No better proof of the richness of the agricultural resources of the locality can be adduced than a reference to the shipping returns in 1884 and 1885. The estimate of the produce dealers puts the shipment of wheat from the county of Kent alone, which comprises the largest part of the consular district, at 1,200,000 bushels, the greater portion manufactured into flour; 100,000 bushels barley, 250,000 bushels white beans, 150,000 bushels corn, 500,000 bushels oats, 25,000 bushels clover seed, 15,000 hogs, 5,000 pounds dead poultry, 500,000 dozen eggs, and hundreds of car loads of horses and live stock. Of the above shipments about the following proportions are exported to the United States: Wheat and flour, 20 per cent.; barley, 60 per cent.; beans, 75 per cent.; corn, 10 per cent.; oats, 10 per cent.; clover seed, 50 per cent.; poultry, 75 per cent.; eggs, 90 per cent.; horses and live stock, 80 per cent.

There is an increase in the acreage sown with fall wheat this season. The drought of the summer and the low prices have deterred a good many farmers from sowing as much as usual, but, on the other hand, the failure of spring wheat in many places led others to try a greater breadth of winter wheat. With few exceptions the grain has made remarkable progress, and is in fine condition to withstand the hardships of winter. In some localities 40 bushels per acre of fall wheat is reported as an average crop, and a particular yield 47 bushels per acre, and several reports are made of a yield of 30 bushels per acre. Except in a few places, where there was too much rain, the quality of the grain is far above the average. Tests of weights seem to have given very satisfactory results. One case from Harwich, Kent County, of 68 pounds to the bushel is reported, and a number of returns mention weight in excess of standard.

Barley.—Barley has been a fairly successful crop. The rains in some localities have caused more or less discoloration. Still the proportion of number one will compare favorably with other years. In nearly all cases where the grain was early enough to escape the early fall rains, the sample is remarkably good and the yield somewhat above the average.

The oat crop of this section appears to be at least a full average both in yield and quality.

Rye was a fair average crop in the district, and appears to be generally satisfactory both as to quality and yield.

Peas.—Over the whole of this district there is a remarkable uniformity in the report as to this year's crop. Very good and no bugs, is the universal report.

Beans.—In Kent and Essex Counties beans have been a very successful crop, though kept back to some extent by the severe drought. The sample is good, the crop harvested in good condition. Outside of this district there are few beans grown in Canada. I would call your attention to the table published in this report showing the amount of beans grown in this district. The average price paid during the past year was $1.10 per bushel.

Sorghum.—Sorghum was never very extensively cultivated in Ontario, and at present it seems to be steadily declining in favor, owing chiefly to the comparative failure of the crop for the last few years. This year's crop is sufficiently doubtful in its product to justify the anticipation of a still further decline in the small acreage now sown, though some farmers in Essex and Kent report a fair yield. The quantity grown elsewhere in the province of Ontario is so small that no report is made of it.

Field roots.—Potatoes this year have been an unsatisfactory crop in most parts of this district. The drought contributed largely to the failure of the crop. The growth of the potato plant was very much retarded by the dry weather of early summer, and it was only under exceptional circumstances that they were able to contend with this adverse influence. It is worthy of notice that special care in preparation of the soil before planting and cultivation afterwards was rewarded by superior crops.

Turnips, mangels, and carrots are, with very few exceptions, reported on most favorably.

Clover seed is another staple peculiar to this section, and is raised in large quantities.

The following table shows the area and produce of the different kinds of grain raised in the counties of Kent and Essex, Ontario, in the year 1886:

Description.	Essex.		Kent.	
	Acres.	*Bushels.*	*Acres.*	*Bushels.*
Fall wheat	32,188	712,178	63,567	1,390,846
Spring wheat	1,744	25,288	3,456	61,932
Barley	2,894	80,540	4,954	141,883
Oats	28,852	1,253,908	32,616	1,422,384
Rye	664	13,751	541	9,976
Peas	4,399	82,217	12,878	297,789
Corn	81,294	2,847,050	26,544	1,928,422
Buckwheat	660	17,932	675	18,813
Beans	483	12,075	12,069	267,932

AVERAGE PRODUCTION.

Table showing the average produce of crops per acre in Essex and Kent Counties in the year 1886.

Description.	Essex.	Kent.	Description.	Essex.	Kent.
Fall wheat.....bushels..	22.2	21.9	Buckwheat.....bushels..	27.2	21.5
Spring wheat.....do....	14.5	17.9	Beans.....do....	25.0	22.2
Barley.....do....	27.8	28.6	Hay and clover.....tons..	1.43	1.25
Oats.....do....	43.5	43.6	Potatoes.....bushels..	90.2	117.8
Rye.....do....	20.7	18.4	Mangel-wurzes.....do....	500.0	552.1
Peas.....do....	18.7	23.1	Carrots.....do....	256.7	332.2
Corn (in ear).....do....	75.0	72.7	Turnips.....do....	338.8	335.8

COMPARATIVE YIELD OF CROPS.

In the following table is presented the yield per acre of wheat, barley, and oats in Ontario and eight of the principal grain-growing States of the American Union for the five years 1882–'86:

Description.	1886.	1885.	1884.	1883.	1882.
Fall wheat:	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Ontario	20.4	24.5	24.0	10.6	26.3
Ohio	15.7	8.1	15.3	9.5	16.7
Michigan	16.3	20.0	14.0	12.0	17.3
Indiana	15.1	10.8	13.2	10.4	15.7
Illinois	13.1	9.2	12.6	10.0	16.0
New York	17.0	15.5	16.5	11.0	18.7
Pennsylvania	13.0	10.0	15.0	13.5	15.5
Spring wheat:					
Ontario	16.5	11.4	20.2	16.6	16.5
Iowa	12.5	11.2	12.5	12.7	11.0
Minnesota	12.6	11.5	16.1	13.2	13 3
Barley:					
Ontario	26.5	27.7	27.3	24.3	28.6
Ohio	27.0	20.5	26.0	21.0	19.9
Michigan	22.5	27.0	23.0	21.0	25.2
Indiana	21.0	12.5	23.0	20.4	24.0
Illinois	22.0	22.3	24.0	26.0	22.5
New York	22.0	22.0	23.0	24.5	25.0
Pennsylvania	18.0	18.5	19.0	25.0	23.5
Iowa	22.5	23.0	23.0	23.6	21.7
Minnesota	23.0	23.8	26.4	24.0	23.3
Oats:					
Ontario	36.2	35.8	38.9	38.5	36.4
Ohio	33.0	34.5	29.0	34.0	28.0
Michigan	30.0	35.5	32.0	36.7	33.3
Indiana	30.8	31.5	30.0	30.5	27.0
Illinois	31.6	32.7	33.0	33.0	37.4
New York	29.0	28.0	30.0	32.0	34.2
Pennsylvania	32.1	27.0	28.0	33.0	27.8
Iowa	34.3	32.5	32.0	36.0	31.8
Minnesota	34.5	34.7	35.3	37.0	40.0

Apples.—The apple crop, the most important of the fruits of Ontario, has been fairly good. In general the trees have borne most freely in this district, while in the central portion of Ontario the crop has been a comparative failure. From this district thousands of barrels are being shipped to the United States and England. Prices are rather low, though profitable, the average price reported as paid to farmers in this locality being $1 per barrel, and sales to ship have been made as high as $2.50 per barrel. The estimated crop for 1886 is 40,000 barrels in Kent County alone.

LIVE STOCK.

At present the condition of live stock throughout this section is on the whole very encouraging. Cattle, sheep, and hogs are, as a rule, in high condition for commencing the winter, and if the prevailing low prices do not tempt farmers to winter too many animals for the feed they have, the outlook may be regarded as very favorable. The tendency, however, appears to be to hold live stock for higher prices, and as the supply of hay and straw is generally light, it is possible that such a large amount of rough stock may be thrown on the market in the latter part of the winter or early spring as will bring about a severe decline in prices.

DAIRY INDUSTRY.

The severe droughts of the season have seriously affected the cheese and butter production, although from reports gathered from this section I should say the production was about one-fourth less than the average. I am inclined to think the majority of the farmers pay more attention to beef production than to dairying. One great reason for this is the difficulty of securing efficient domestic servants at any reasonable price. The average farmer's wife has quite enough to do without taking upon herself the cares of a dairy. Wherever creameries have been introduced thus far they appear to have been very generally approved by the farmers, as stockmen prefer to dispose of their cream and feed the skim milk on the farm. The price of butter the past year has ranged from 16 to 18 cents, and 10 to 12 cents for cheese. The cattle mostly raised in this section are Shorthorns. They, with their grades, are so much in favor with farmers that for many years they were almost the only improved cattle known in Canada. Holsteins have been but recently introduced in this part of Ontario. It appears that they have found unusual favor with farmers in this section. Herefords are not raised to any extent in this locality. Polled cattle are being introduced, and several herds are owned in the county of Kent. Ayrshires, Jerseys, Holsteins, and Shorthorns are invariably favored in this part of Ontario.

MINERALS.

The mineral production is chiefly petroleum. The official returns, 1884, give the raw product at 550,000 barrels, and its value $1,210,000. The number of wells operated, 2,200; number of refineries in operation, 9. Salt has been struck near Bothwell at a considerable distance, and the brine is said to be full strength of 100 degrees.

This is equal to the best wells in Canada, and the industry is probably on the eve of great development. It is estimated that one cord of good body wood will produce, boiled down, 12 barrels of salt; the average value is 70 to 80 cents per barrel.

STAVES, HOOPS, AND HEADING.

This industry has grown to large proportions. Numerous mills have been erected in different parts of the district, giving profitable employment to thousands of people, and throwing thousands of dollars into the hands of the owners of hitherto worthless elm timber, besides materially assisting the farmer in clearing his land. I herewith annex a detailed report of the mills in this section, giving the amount invested in the plant, the amount of capital required to operate the same, number of men employed and wages paid, and the entire output of the mills.

It is estimated that 50,000,000 feet, board measure, of elm timber is annually exported from Western Ontario into the United States, and on which no duty is paid, said timber being entirely used in the manufacture of cooperage stock.

Under the duty of 10 per cent. on elm staves only about 17 to 20 per cent. of the total output of the mills in this district goes to the United States for consumption; the balance is used for the Canadian and European market.

The duty of 35 per cent. on hoops and heading prohibits shipment for consumption to the United States. All the hoops and heading manufactured here are used for Canadian and European trade.

The following table will give the number of mills engaged in manufacturing cooperage stock, the amount of capital invested in the plants, the number of men employed, the average wages paid, skilled and unskilled labor, the amount of capital required to carry on the business, and the entire output of the mills:

Number of mills	25
Amount of capital invested in the plants	$348,000
Number of men employed	1,255
Amount paid skilled labor, per day	$2 00
Amount paid unskilled labor, per day	1 20
Amount of capital required to carry on business	696,000
Entire output of mills	820,500

The manufacturers of cooperage stock in this consular district have petitioned the minister of finance for the Dominion of Canada to ask Parliament to put an export duty on elm logs, elm stave-bolts, and basswood heading-bolts, for the following reasons:

(1) That each year there is exported from the above-mentioned district large quantities of elm saw-logs, elm stave-bolts, and basswood heading-bolts, which are taken just across the international boundary between Canada and United States and there manufactured into staves, hoops, and heading.

(2) That by the process of manufacture of such staves, hoops, and heading the value of the raw material from which they are taken is enhanced more than three fold, and when this raw material is taken to the United States to be manufactured Canada is losing the advantage of having it manufactured here; loses at least double the value of such raw material.

(3) That the duty charged by the United States upon cooperage material imported from Canada is as follows: Upon hoops, 35 per cent., upon staves 10 per cent., and upon heading 35 per cent., and manufacturers here are compelled to pay duties at those rates upon such prices for said cooperage stock as the officials at Washington see fit to fix, irrespective of the actual values or market prices here.

(4) That by having to pay such duties, and by having to pay duties upon the prices fixed at Washington, the manufacturers here are placed at a great disadvantage in the American market in competing with the manufacturers across the international border who get their raw material in Canada at the same rates as the manufacturers here, and escape paying any duties by manufacturing in Michigan.

(5) That at present about five times as much cooperage raw material is exported as is manufactured in Canada, and unless something is done to check the export of such raw material the whole supply will be gone from said counties in five years.

(6) That owing to the large number of cooperage mills now erected in Western Canada, and the competition thereby engendered, checking the export of raw material would not have a tendency to permanently depreciate the value of such logs and bolts.

Your petitioners submit that the cooperage industry is as deserving of protection at the hands of the Government as any other industry carried on in Canada, and they pray that it may be protected and fostered by the imposition of an export duty upon elm saw-logs, elm stave-bolts, and basswood heading-bolts.

JAMES EDDY,
Consular Agent, Chatham.

LONDON.

Report of Commercial Agent Washington.

REMARKS UPON EXPORTS.

This subject was treated in detail in a report upon the business of the March quarter of 1886, which was inserted in the Commercial Relations for 1884 and 1885, and as there have been no radical changes since then an analytical treatment of same would more or less plagiarize what has before been made public and is unnecessary. It will be seen from the subjoined table that the general increase for year ending June 30, 1886, as compared with 1885, was $116,517.52 in volume, which, I think, indicates a very healthy condition of trade, being an increase of 19.76 per cent. over previous year. I have therefore paid especial attention to our trade with Canada, under its different headings, which I think will be of greater interest and value to our merchants.

Statement showing the declared value of exports from the consular district of London, Ontario, to the United States during the four quarters of year ending June 30, 1886.

Articles.	Quarters ending—				Total.
	Sept. 30, 1885.	Dec. 31, 1885.	Mar. 31, 1886.	June 30, 1886.	
Animals	$29,465 53	$22,198 00	$69,834 70	$38,326 50	$159,827 73
Animals for breeding	.....	52,528 50	61,899 00	21,836 50	136,264 00
Apples, green and dried	.....	5,122 35	2,159 00	.....	7,281 35
Ashes, wood	.....	.....	1,368 00	1,939 50	3,307 50
Barley and other grain	1,201 88	36,642 04	56,663 00	7,401 50	101,908 42
Bones for fertilizers	.....	.....	680 00	1,884 00	2,564 00
Car wheels, "old"	.....	9,780 25	1,557 37	.....	11,337 62
Eggs	21,048 00	29,140 50	.....	30,359 10	80,547 20
Flax and tow	.....	5,550 29	20,543 86	10,066 91	36,161 06
Hay	1,032 00	1,134 00	5,647 25	4,489 30	12,302 55
Hides and sheep skins	5,512 59	8,523 57	16,249 16	6,477 75	36,763 07
Lumber	2,823 50	1,214 95	441 17	2,480 00	6,959 62
Manufactured goods	182 60	1,061 27	968 98	.....	2,212 85
Miscellaneous	386 00	3,178 10	5,672 75	8,678 13	17,914 98
Oil, lubricating	.....	11,662 55	.....	.....	11,662 55
Personal effects	16,262 00	12,778 00	24,242 99	19,455 50	72,738 49
Salt	483 00	.....	487 20	112 50	1,082 70
Split peas	.....	.....	3,048 17	735 00	3,783 17
Tobacco returned	.....	.....	1,140 45	.....	1,140 45
Vegetables	.....	414 88	.....	.....	414 88
Total	78,400 70	200,929 25	272,603 05	154,241 19	706,174 19
Total for preceding year	79,824 49	236,719 17	128,560 99	144,552 02	589,656 67
Decrease or increase	1,423 79	35,789 92	144,042 06	9,689 17	116,517 52

I also, append a table below showing the amount of duties, approximately, paid on the exports from the consular district, from which may be gained some idea of the revenue accruing to the United States from this source.

Statement showing the approximate amount of duties payable to the United States on exports from consular district of London, Ontario, for year ending June 30, 1886.

Articles.	Declared value.	Approximate duty.	Articles.	Declared value.	Approximate duty.
Animals	$159,827 73	$31,975 34	Manufactured goods	$2,212 85	Free.
Animals for breeding	136,264 00	Free.	Miscellaneous	17,914 98	Free.
Apples, green and dried	7,281 35	Free.	Oil, lubricating	11,662 55	$450 67
Ashes, wood	3,307 50	Free.	Personal effects of emigrants	72,738 49	Free.
Barley and other grain	101,908 42	5,095 50	Salt	1,082 70	692 00
Bones for fertilizers	2,564 00	Free.	Split peas	3,783 07	740 00
Car wheels, old	11,337 62	976 00	Tobacco, returned	1,140 45	Free.
Eggs	80,547 20	Free.	Vegetables	414 88	43 00
Flax and tow	36,161 06	204 00			
Hay, pressed	12,302 55	3,074 00	Total	706,174 19	43,935 51
Hides and sheep-skins	36,763 07	Free.			
Lumber	6,952 62	586 00			

The principal items of imports will be found generally treated in detail in the following remarks upon London's trade, and only those remain unmentioned which are used by the public direct or by the manufacturing interests, full particulars of which may easily be ascertained by reference to the appended tables of imports as shown at the custom-house of the port of London.

The imports to this city are steadily growing, as is seen by a comparison of the years 1885 and 1886, which show an increase of $219,671, and I learn from the collector here that present indications point to a continued and larger increase for the present year. It may not be amiss to remark here that London ranks sixth as a port of entry in the Dominion of Canada.

Value of dutiable goods imported into Canada at the port of London, and amount of duty paid thereon, year ending June 30, 1886.

Articles.	Great Britain.	United States.	Other countries.	Duty.	Rate of duty.
Agates	.....	$1	.....	$10	10 per cent.
Ale, beer, &c., bottled	$1,315	.....	.....	367 20	18 cts. imperial gall.
Animals	66	2,409	.....	495 00	20 per cent.
Baking powder, &c	.....	3,050	.....	639 38	6 cts. per lb.
Blacking	354	1,035	.....	355 25	25 per cent.
Black lead	788	239	.....	154 20	20 per cent.
Blueing	590	30	.....	155 00	25 per cent.
Books, periodicals, &c	7,175	20,190	$849	5,426 55	15 per cent. and 30 per cent.
Boot, shoe, and stay laces	527	432	.....	287 70	30 per cent.
Braces, &c	2,674	3,012	.....	1,705 80	30 per cent.
Book-binders' tools	196	32	.....	22 80	10 per cent.
Brass, manufactured	764	8,099	3,656	3,748 20	10 to 30 per cent.
Breadstuffs	3,334	17,381	12	3,496 53	Various.
Brick, &c., and drain-pipes	282	4,816	.....	1,178 65	20 per cent.
Brushes	319	2,316	.....	658 75	25 per cent.
Buttons	7,165	1,467	1,107	2,444 75	25 per cent.
Candles, &c	138	374	.....	129 60	Tallow, 2 cts. per lb.; paraffine, 5 cts. per lb.
Carriages, and parts	2,242	3,990	.....	2,051 20	35 per cent.
Cases, jewel, &c	26	163	.....	56 70	30 per cent.
Cement	108	676	.....	390 20	40 cts. per bbl.
Cider	.....	26	.....	5 20	10 cts. per gal.
Clocks and parts	.....	1,319	50	480 25	35 per cent.
Coal and coke	.....	13,569	.....	19,572 54	Anth., 50 cts. per ton; bit., 60 cts per ton.
Coal tar, &c	.....	596	.....	59 60	10 per cent.
Cocoanuts	.....	1,667	.....	503 88	$1 per 100.
Cocoa paste	167	1,596	.....	592 78	1 c. per lb. and 25 per cent.
Coffee	.....	3,082	.....	312 47	10 per cent.
Collars, cuffs, &c	2,078	4,473	.....	1,965 30	30 per cent.
Combs	3,220	221	81	880 50	25 per cent.
Copper	1,817	1,721	85	523 10	20 and 30 per cent.
Corks and corkwood	51	2,431	.....	496 40	20 per cent.
Cordage	.....	25	.....	5 00	20 per cent.
Cotton, manufactured	277,855	23,449	2,073	70,831 12	Various.
Crapes	3,576	268	.....	768 80	20 per cent.
Chalk	30	.....	.....	6 00	20 per cent.
Drugs and chemicals	10,629	26,936	1,074	9,174 41	Chiefly 20 per cent.
Earthenware	27,932	568	5,688	11,100 70	30 per cent.
Electric batteries, &c	.....	241	23	65 00	25 per cent.
Essences, &c	.....	222	.....	93 69	$2 per gal. and 30 per cent.
Emery wheels	.....	3	.....	75	25 per cent.
Excelsior	.....	110	.....	23 20	20 per cent.
Fancy goods, flowers, &c	34,640	7,007	6,378	11,646 93	30 per cent.
Fireworks	.....	248	.....	62 00	25 per cent.
Fish	1,351	5,770	.....	1,021 08	1 c. per lb. chiefly.
Flax and jute, and manufactures of	33,742	2,334	45	8,070 60	
Fruits:					
Dried, and nuts	6,095	11,118	19,122	7,570 67	
Green	3,164	20,139	.....	5,596 54	
Furs and skins, dressed, and manufactures of	5,850	6,460	.....	2,165 95	Partially dressed, 15 cts.; fully dressed, 25 per cent.
Glass, and manufactures of	16,884	24,917	21,508	18,074 20	30 per cent.
Gloves, &c	26,408	75	258	6,786 25	30 per cent.
Gold, and electro-plate and rolled goods	1,379	4,869	.....	1,896 25	30 per cent.
Gunpowder	.....	978	.....	371 10	5 cts. per lb.
Gunpowder, cartridges	884	721	.....	331 60	30 per cent.

Value of dutiable goods imported into Canada at the port of London—Continued.

Articles.	Great Britain.	United States.	Other countries.	Duty.	Rate of duty.
Gutta-percha, and manufactures of.	$8,829	$14,282	$42	$7,053 15	25 per cent.
Grease, axle, &c	.....	136	.....	5 95	1 cent per lb.
Hair, &c	1,445	1,365	.....	566 70	20 per cent.
Hats, caps, &c	32,729	50,908	104	20,935 25	25 per cent.
Hops	882	2,105	370	1,379 64	6 cts. per lb.
Ink, printing and writing	85	2,775	.....	593 40	Writing, 25 per cent.; printing, 20 per cent.
Iron, and manufactures of	68,168	109,319	855	41,204 17	10 to 30 per cent.
Steel, and manufactures of	20,920	14,995	405	8,705 75	10 to 20 per cent.
Jellies and jams	140	.....	.....	88 95	5 cts. per lb.
Jewelry	379	4,448	21	969 20	20 per cent.
Lead, and manufactures of	795	268	.....	416 24	5 per cent. and 30 per cent.
Leather:					
Boots and shoes	491	8,627	80	2,301 75	25 per cent.
Other manufactures	4,423	12,586	1,078	3,931 00	20 and 30 per cent.
Malt	638	.....	.....	71 02	15. cts. per bushel.
Marble	.....	5,636	136	1,296 00	10, 20, 30 per cent.
Mats, rugs, &c	1,093	173	.....	316 50	25 per cent.
Metal	2,698	6,942	31	2,360 25	
Mineral substances	372	1,946	.....	464 55	
Musical instruments, &c	118	8,132	2,024	2,879 00	25 per cent.
Mustard	2,112	1,665	.....	984 75	25 per cent.
Oil:					
Coal	.....	3,330	.....	1,432 06	7½ cts. per gallon.
All other	1,400	4,462	87	1,330 46	20 per cent.
Oil cloth	3,215	7,274	.....	3,256 60	5 cts. per yard and 10 per cent.
Optical goods	119	289	.....	102 00	25 per cent.
Packages	721	2,853	625	809 00	20 per cent.
Paintings, &c	107	770	18	179 00	20 per cent.
Paints, &c	3,000	6,194	225	1,588 95	
Paper, envelopes, &c	8,436	33,089	1,857	11,280 31	10 to 30 per cent.
Pencils, &c	38	1,177	479	423 50	25 per cent.
Perfumes, hair oil, &c	111	1,050	232	420 60	30 per cent.
Pickles, sauces, &c	1,241	108	.....	398 75	25 per cent.
Plants	85	361	.....	89 20	20 per cent.
Printing presses	.....	932	.....	93 20	10 per cent.
Provisions	.....	5,298	.....	1,434 92	
Paraffine wax	.....	264	.....	67 98	3 cts. per lb.
Plaster of paris, &c	.....	5	.....	1 13	25 per cent.
Salt	4	.....	.....	24	12 cts. per 100 lbs.
Seeds	2,692	7,405	707	1,609 50	15 per cent.
Silk, manufactures of	105,461	3,821	.....	32,978 88	15, 25, 30 per cent.
Slate, roofing and school slates	.....	1,485	.....	369 00	80 cts. per square.
Soap	207	2,075	246	764 18	2 cts. per lb.
Soap powder	.....	2,165	.....	826 44	3 cts. per lb.
Spices	2,933	4,839	.....	1,273 60	Unground, 10 per cent.; ground, 25 per cent.
Spirits	353	101	3,410	6,234 38	
Sponges	120	1,068	.....	237 60	20 per cent.
Starch	92	681	.....	448 02	2 cts. per lb.
Stone:					
Building and flag	.....	4,190	.....	923 55	$1 per 13 cubic feet.
Manufactures of	779	4,964	107	1,140 80	20 per cent.
Sand-paper, &c	.....	392	.....	98 00	25 per cent.
Straw, manufactures of	.....	54	.....	10 80	20 per cent.
Sugar and sirups	1,210	7,572	363	4,779 19	
Sugar, glucose sirup	.....	3,261	.....	2,712 28	2 cts. per lb.
Tea	.....	1,009	.....	100 90	10 per cent.
Tin, and manufactures of	1,290	5,245	1,768	2,076 65	25 per cent.
Tobacco, manufactured, and cigars	.....	299	2,387	1,705 22	30 cts. per lb. and 12½ per cent.
Turpentine, spirits of	.....	3,902	.....	396 20	10 per cent.
Trunks, satchels, &c	573	2,519	72	940 20	30 per cent.
Twines	81	1,846	.....	485 50	25 per cent.
Trees, fruit, &c	28	872	.....	182 48	From 2 to 6 cts. each.
Unenumerated	82	623	.....	124 60	20 per cent.
Varnish, &c	6	3,048	.....	884 72	Cut with spirits, $1.90 per gall., 20 cts. per gall. and 20 per cent.
Vegetables	.....	1,025	.....	216 66	20 per cent.
Vinegar	.....	1	.....	90	15 cts. imp. gall.
Wax	.....	110	.....	22 00	20 per cent.
Watches, and parts	117	1,488	.....	383 75	25 per cent.
Whips	148	4,520	42	1,246 15	30 per cent.
Wood:					
Manufactures of	2,137	22,761	4,017	7,993 50	25 per cent.
Lumber and timber	.....	1,456	.....	291 20	20 per cent.
Wool, manufactures of	353,423	5,050	1,011	97,330 25	Various.
Zinc	.....	118	85	50 75	25 per cent.
Total	**1,121,847**	**776,865**	**84,470**	**498,475 55**	

Free goods entered at the port of London, year ending June 30, 1886.

Class of goods.	Great Britain.	United States.	Other countries.
Produce of the mine	$090	$1,280	.....
Produce of fisheries	.....	23	.....
Produce of the forest	.....	13,042	.....
Animals and their products	4,768	92,969	.....
Agricultural products	489	58,252	.....
Manufactures	66.769	63,345	$221
Miscellaneous	235	992	2,240
Settlers' effects	1,365	25,735	.....
Tea, black and green (China)	40,089	.....	9,501
Tea, black and green (Japan)	.....	.....	9,102
Total	114,405	255,637	21,064

SUMMARY.

Countries.	Dutiable.	Free.	Totals.
Great Britain	$1,121,847	$114,405	$1,236,252
United States	776,365	255,637	1,032,002
Other countries	84,470	21,064	105,534
Totals	1,982,682	391,106	2,373,788

The statement of values of free goods imported at London has not been given in detail on account of the great variety of items included in the different classes and the comparatively small quantities of each article.

The importations of products of the mine are chiefly composed of fire-clay, pipe-clay, gravel, sand, and salt.

Products of the forest, all of which are from the United States, consist of walnut, whitewood, oak, and Spanish cedar lumber; the first named being in proportion of 75 per cent. of the whole.

Agricultural products are mostly bought of us. Tobacco, unmanufactured, $48,416; broom-corn, $7,049; vegetable fiber, $2,113. Of the latter article England supplies only $489.

Animal and other products, as follows:

Bristles: from—	
United States	$12,031
England	2,068
Grease, &c.:	
United States	27,091
England	*nil.*
Hides, &c.:	
United States	42,387
England	*nil.*
Products:	
United States	5,013
England	153
Horses:	
United States	2,449
England	5,600

These latter are entirely for breeding purposes.

While Great Britain leads us in imports by $204,250 only, her exports probably greatly exceed this amount.

London is popularly known, and justly so, as the "forest city" of Canada on account of its broad streets, its boulevards and avenues of shade trees running in four lines along each thoroughfare. The city is com-

paratively a new one, as early in the year 1826 a Scotchman named McGregor, with two or three associate pioneers, erected a humble-looking log shanty near the junction of the two branches of a stream, now called the Thames, that then flowed through a dense and rugged wilderness. From such an origin has grown the flourishing and beautiful metropolis of Western Ontario, with a population, including the suburbs of London, West and South, of about 40,000; consequently this year witnesses the sixtieth anniversary of its foundation. It is also a farmers' center, and surpasses any other city in the Dominion as possessing one great advantage denied Hamilton, Toronto, Montreal, and other large cities of the Dominion, being on all sides surrounded by the richest farming section in the province, the inhabitants of which look to London as their natural market. On market days the streets are thronged by the prosperous husbandman and farmer, making a bright and busy scene.

As a monetary center the figures given below will give some idea of its standing. The figures are from the official statements of the companies named:

London savings banks.

Name.	Paid-up capital.	Deposits.	Debentures.	Total assets.
Huron and Erie Loan and Savings Company.	$1,100,000 00	$1,072,471 32	$595,616 67	$3,234,547 05
Ontario Loan and Deposit Company	1,200,000 00	491,191 46	1,335,097 73	3,239,695 62
Dominion Savings and Loan Company	894,343 94	806,363 24	214,282 34	2,102,871 24
Agricultural Savings and Loan Company	614,694 95	571,892 05	209,685 31	1,477,092 83
Canadian Savings and Loan Company	667,122 81	679,662 68	136,986 40	1,647,961 32
London Loan Company	552,089 09	442,665 50	108,800 00	1,157,424 96
Royal Standard	153,291 97	171,409 88		341,511 61
Ontario Investment Association	662,787 16		1,239,780 00	2,413,958 39
Empire Loan and Investment Company	80,329 53	71,136 58	12,000 00	170,331 82
Total	5,924,628 35	4,217,192 71	3,842,248 45	15,785,394 84

It will thus be seen that London, with a population of 40,000, has in its savings banks alone $4,200,000, which fact speaks eloquently for the thrift of the working classes; the additional deposits in chartered banks and the post-office savings bank raising this sum up to $6,500,000.

The loan companies, as will be seen, have issued debentures to the extent of $3,842,000, almost all of which were given for money imported from Great Britain, thus materially reducing interest and enabling all to obtain money on the most advantageous terms. Indeed, it is a notorious fact that the competition for its loans are keener here than in any other city in the Dominion.

It will also be seen that these institutions have a paid-up capital of $5,924,628, and their total assets amount to $15,785,394. When it is remembered that these are purely local institutions, having their inception, fostering, and success in London, it is indeed surprising, and I believe few cities in the United States of even 50,000 inhabitants have anything like $16,000,000 as assets to their savings banks.

Of the regular banks within the last few years London has established a bank of its own and has so far had every encouragement, meeting amongst its big competitors with a fair measure of success. It has also had for years past branches of the Bank of Montreal, Bank of British North America, the Merchants' Bank, Canadian Bank of Commerce, Molson's, and Federal Banks. The business done with these institutions is very large, the discounts in the aggregate for all of them being not less than $5,000,000 to $6,000,000, and it has frequently been the remark that the banks doing business in London have escaped with less loss and

made fewer bad debts than in any other city in the Dominion, surely attesting the sound nature of the business to be done here.

On the whole, therefore, we can fairly conclude that London as a monetary center of this Dominion actually takes a very high place, and, comparatively speaking, is second to none.

It may be said in conclusion that none of these institutions pay dividends of less than 6 per cent. and many from 8 to 10 per cent., besides returning large amounts to surplus funds.

As a proof of the excellent character of risks, one institution whose loans amounted to nearly $3,500,000 lost only $1,100 by bad security last year.

RAILWAY FACILITIES.

London's position as a railroad center is indeed an enviable one. More railroads lead into it now than there are points to the compass, and before many weeks are over it will secure connection with the Canadian Pacific Railroad, also the Michigan Central Railroad, this latter bringing it into direct connection with the Vanderbilt system and thus giving the most excellent connections with all points of the United States. Being inland this is of great importance. At the present time we have the main line of the southern division of the Grand Trunk, leading west to Chatham, Windsor, and Detroit, east to Woodstock, Hamilton, Toronto, and Suspension Bridge; the Sarnia branch going westward to Port Huron, and the London, Huron and Bruce to Clinton and Goderich; the Stratford branch running through to Saint Mary's, Stratford, and Guelph, and the Port Stanley branch giving us access to Saint Thomas and Lake Erie.

The principal drawback to all these facilities in the past has been the fact that with the exception of the two first-named roads all the other roads were a few years ago absorbed by and under the control of one company, leaving the merchants and manufacturers without the benefit of competition in respect to freight rates. This, however, on the completion of connections of the two first-named roads, will be done away with, and should any of our merchants and manufacturers or others desire to establish Canadian agencies or branches, I do not believe there is a better or more convenient place to locate than this in the Dominion of Canada.

INFORMATION FOR AMERICAN TRADERS.

Remarks upon London's commercial importance would be sadly incomplete without the mention of one of its most prominent features, its wholesale trade, an idea of the growth of which may be gained when it is known that twenty years ago there was not a wholesale house in the place, whereas now there are fifty, worth over $3,000,000 capital invested in the businesses, and who sell annually $8,000,000 worth of goods.

The business extends all over Canada, from Prince Edward Island to British Columbia, and the goods and wares are laid before the retail trade by several hundred traveling salesmen. Surely such a trade as this is worth the attention of our merchants. I lay it before each individually, in the following remarks regarding our existing trade and the trade in the past, what is best suited to this market, and what it demands of our merchants in the United States in regard to changes of patterns, style, &c., required by the market here, all of which I have gathered with great labor by personal interviews with the merchants here, and which I hope will be found acceptable and useful by calling

the attention of our merchants to a market that appears to be sadly neglected by them, and which I hope in the future will receive more attention, as I am sure the field will amply remunerate those who will cultivate it, for the factories which do exist here are small and incomplete compared with our own, and do not turn out the goods with the same style and finish or in such endless variety as do the American, and, moreover, the inclination is to buy from us whenever possible.

We here meet England on even ground, and as is shown in a table elsewhere given, sell them 48 per cent. of all their imports, while Great Britain, Canada's mother country, sells them only 38 per cent., which speaks well for us, and with push and energy I feel certain we could get a much larger percentage of the trade.

Wholesale houses.—For the information of merchants, manufacturers, and others in the United States doing an export trade I append a condensed list of wholesale houses, which will act as a sort of directory to those seeking a new field for trade, and show about the amount of capital invested in the various branches of legitimate business here. The estimates have been made with great care and in all cases are rather under than over the mark. The figures given are for estimated capital actually invested. Their various commercial rating and responsibilities would probably amount to double the sum.

Statement showing the various wholesale businesses carried on in the city of London, Ontario, with their estimated capital invested.

No.	Description.	Estimated capital.	No.	Description.	Estimated capital.
2	Boots and shoes	$250,000	4	Hardware, wholesale and retail	75,000
2	Carriage and saddlery hardware	50,000	2	Hats and caps	75,000
3	Crockery and glassware	200,000	2	Jewelers	25,000
3	Druggists	150,000	3	Leather and findings	100,000
7	Dry goods and millinery	750,000	6	Lumber	100,000
3	Groceries, wholesale only	400,000	2	Seeds	25,000
7	Groceries, wholesale and retail	300,000	1	Stationery	60,000
1	Hardware, wholesale only	300,000			

Boots and shoes.—Boots and shoes are largely manufactured in Canada, and there is one extensive factory in this city who also make their own leather; by this advantage, and by the use of all the most improved American machinery, they successfully rival us in cheap goods, and only buy of us a few lines of children's shoes and slippers.

A large quantity of fine goods are sold in this country, but as the wholesale men cater principally to the country and small trade who do not want expensive stock, it is sold direct to the principal retailers.

They say that Americans imitate fine French goods so perfectly that it is almost impossible to tell them apart, and consequently they are often sold as French goods.

In American rubber shoes last year a large number were bought, as they then allowed entry to be made at actual discount, but now the best discount allowed by Canadian customs is 35 per cent. off list price, while they can actually be bought at 50 per cent.

With the above-mentioned discount allowed, and 25 per cent. added for duty, it makes the cost of such goods laid down here rather more than the full American list price, which is more than the trade can afford and than what they can buy Canadian-made goods at, though the latter are inferior in every respect and not so popular with the public. But for the reappraisement American goods would sell well.

Carriage hardware.—About 25 per cent. of all the goods sold by this trade in Canada come from the United States, and consist of shelf goods, carriage fittings generally, malleable castings, whip twines, wrenches, and a few patented goods.

There was a large trade done in real and artificial leather for carriages, but the home factories, high tariff, and English goods, have killed this trade.

Axles were brought in till last year, when the duty was increased from 30 to 35 per cent. A recent advance in the price of carriage-bolts in the United States has rendered them also too expensive for this market. This probably is owing to the failure of a combination of manufacturers to provide a discount for export trade.

I think we should look after this leather trade, as I find it is neglected, and showed in every line that by fair dealing and a little extra exertion that it could be controlled.

America leads in this class of goods all through, and England copies our goods, and as soon as they do, reduce the price and undersell us. So that we must keep constantly on the move to retain our trade, and change styles frequently to stay ahead. We should always try to get on staple lines, as there are large sales and profits in them.

This trade is well served and frequently visited, but if examined for openings intelligently would increase, as there are chances of more business than we now do. It is a matter of dollars and cents with the merchants here, but they give us the preference whenever possible by buying from us.

Saddlery hardware, etc.—At least one-half of the goods used in this industry come from the United States, and we have a strong hold on the trade that is unshaken by a few factories in Canada who turn out inferior goods that lack the variety both of sizes and lines of goods which we offer.

The styles of harness are rather American than English in this section of Canada, and except in bits most of the trimmings are of American make.

Curry-combs come mainly from the United States, but the English share this trade with us.

There has been a falling off in our trade in wooden hames, the prison labor on which prevents their entry into Canada.

One article comes from England for the trade that we should and ought to be able to supply. It is oak-tanned leather, none of which is made in Canada. That which is imported, however, is trimmed, that is, the belly, legs, and such useless parts for harness-making are cut off, and the side sold in a long clear strip. This brings a higher price, selling for about 65 cents per pound. We could undersell the English article without a doubt if our merchants and manufacturers would cut it as this market requires it, leaving off the useless parts, and letting the parts sold weigh from 12 to 15 pounds a side.

Let our merchants look specially to this item, and adapt our goods, as can so easily be done, to the requirements of the Canadian market.

Glass and crockery.—In glass we supply all the goods used in this market, except very fine cut glass and a few small items. The United States in this and all the other markets confessedly leads the world in pressed glassware.

The trade here is supplied principally from Pittsburgh and Wheeling and towns, such as Wellsburg, along the Ohio River, between the two places above mentioned.

We formerly furnished this market with lamp-chimneys and fruit-jars; but two factories, one at Hamilton and the other at Toronto, with the aid of the tariff, now control and make a very large profit on these goods, shutting us out, however.

In lamp brass goods and lamps we have the entire trade.

While in crockery and earthenware our trade is nominal, we do not make the high-class goods cheap enough to compete with England, and the earthenware used is of very low grade—culls, seconds and thirds—that probably costs little more than the cost of packing and freight from the mother country.

London has probably the largest house in Canada in this line. The building is 60 feet front by 265 feet in depth, and four stories high; also a bonded warehouse of about the same dimensions. They sell all over the Dominion of Canada and have a large trade in British Columbia. They also buy largely of plain crockery, and decorate it upon their premises in a very tasteful manner, and afterward finish it in their own kilns; they likewise buy some plated goods from us.

Our designs and styles in glassware create their own demand, and the trade is increasing on account of their cheapness (due probably to the use of natural gas in their manufacture), which leads the consumers to use more of it.

The Canadian earthenware and pottery manufacturers import most of their clay from New Jersey; but their goods are rather inferior, and lack style and variety.

The goods we sell here run from 25 to 50 per cent. of the gross amount of all articles handled in this line.

Dry-goods trade.—Interviews with several of the largest firms in this business reveal the following state of trade with the United States:

"In 1875, 1876, and 1877 our business with the United States," says one, "was very large, and we bought over $200,000 of goods per year through our brokers in New York and from samples, but now the business we do is merely nominal, amounting this last year to only $20,000, a quantity smaller than ever before.

"There are several reasons for this great decrease. American cotton and prints ten years ago were a large item with us, and now are not bought at all.

"In the first place, the duty on all imported goods of this class has been raised from 17½ to 27½ per cent., but as England and the United States meet on equal footing at the custom-house this should not be the reason why our trade should suffer. There has lately been established in Canada a print works, but their patterns lack style, quality, &c., and do not compare with either the English or American goods. There are other reasons also. While we much prefer to buy American to either home made or English goods, as our profits on them are larger, the trade not knowing so well what they cost us, we find that American houses have ceased to look after or strive for our trade, and do not even furnish us with samples. As it is, frequently when we run short of a class of goods we want to fill it at once, and we have to wire to the United States for samples and prices, then wire an order, all of which is too troublesome. So, although we have an inclination, we do not often buy of them.

"Further, American manufacturers do not make as good goods as the English. Their variety is not so great, nor are the patterns as attractive. Another fault is the narrowness of their goods, and the fact that they sell only in cases of from sixty to one hundred pieces, and will not pack over four patterns to a case, against the English printer, who will pack any number of styles and pieces to our order. This frequently

saves us much trouble in handling, as we can sell the retailer a case as they run and not have to unpack at all."

Quite a number of American cottons and muslins were, however, sold last fall in Canada and took well with the retail trade.

English plain domestic cottons are not so good for this market as American, from the fact that they contain more starch, nor are they so pure in quality. Low-priced goods of this description are in great demand here, and if Americans made an effort they might easily get the trade again, as prices are somewhat less in New York than in Manchester, England. A queer fact, however, is that the rates of freight are about equal from the two points.

Nearly all table oil-cloths come from the United States, though recently a factory for its manufacture has been established in Canada and the duty on them increased to protect the trade.

Appended is an invoice to show the way their values are raised by Canadian customs, and special attention is called thereto, their appraisers not allowing any discount below the American Oil Cloth Association prices, whose figures they are rated at for duty.

The only other articles coming from the United States to this branch of business are corsets, web-elastics, gents' furnishings, hooks, pins, india-rubber goods, &c.

[Copy of invoice.]

* * * *Manufacturers table oil-cloths, New York, to* * * * *London, Ontario.*

		Appraised at for duty.
Jan. 15, 1887, twenty-eight 5–4 mosaics, $1.50	$42.00	$79.80
Jan. 15, 1887, twelve 6–4 mosaics, $2.50	30.00	46.20
Jan. 12, 1887, twenty pieces 5–4 mosaics, $2.85	47.00	57.00
Jan. 12, 1887, ten pieces 5–4 mosaics, $2.35	23.50	28.50
	142.50	211.50

Duty on the above in Canada 5 cents per square yard and 10 per cent. ad valorem paid on American Association prices, namely: 5–4 $2.85, 6–4 $3.85. This shows that the buyer had to pay duty on $211.50, the actual invoice price being $142.50, and this not on account of undervaluation, but simply taking American list price as a valuation.

Under the head of dry goods I have included woolens and men's furnishings, in which there is one very good house in this city. They import from us suspenders, neck-wear, celluloid collars and cuffs, as well as linen, unlaundried shirts, &c., to the extent of at least 8 per cent. of their total business.

Some ten years ago the same house imported largely American cottonades and jeans, but the tariff on them has been so raised and factories for their manufacture started on this side, which have shut us out. A few cheap dyed cotton linings, however, still come in.

American styles and fashion plates govern here, and fancy goods of our make are more popular than English articles.

There is an opening here in this business, however, for large New York houses to sell all the imported woolen goods used by shipping them direct in bond.

They of course buy more and can get better terms than the jobber here, and could act as commission agents, and embody such orders as were received from here with their own, and thus probably make still better terms than they now obtain for their own purchases alone.

New York is the natural port for Ontario, and in this business, if our merchants gave their attention to it, there would be a small but snug

commission, but yet enable the comparatively small buyer from here to still obtain his goods as cheap as from the manufacturer's agents in England. At any rate I have considered it worthy of mention, and therefore brought it forward.

Millinery.—Millinery also is included under the head of dry goods, and is represented by three excellent and reliable firms in this city, who import from the United States straw and felt goods and occasionally artificial flowers, &c., late in the season to fill up depleted lines.

They also use many American hat ornaments, which they say we produce most excellently and, moreover, quite cheaply.

Their trade with us amounts at present to only 7½ per cent., but is increasing.

There is in this section of the country a very warm feeling for the United States, and all merchants express themselves desirous of buying as many of their goods from us as possible on account of the proximity of the market and the similarity of the Canadian consumers' demand to that of the United States whose goods, when prices are equal, are most popular and satisfactory to the trade. With the sympathy of the market in our favor I think that by increasing the width of our prints and packing them to suit we could regain much of our lost trade in this class of goods, though on account of duty and competition the profit would be small. At any rate it well deserves being looked after, and some small orders at least would at once result from American mills keeping the merchants supplied with a full line of samples, and if no orders resulted the loss would be very small.

Drugs.—Probably 25 per cent. of the drugs handled here are from the United States, more particularly herbs natural and indigenous to our soil; also dye-woods, sponges, in bond and from Florida and the Gulf of Mexico fisheries.

A very large amount of American patent medicines are sold in Canada, but most of the larger firms in this line have branch establishments and manufacture on this side. The business, if watched closely and well canvassed, would increase, as the proximity of our market is greatly in our favor in this as in other lines, and there is an inclination to buy as largely as possible from us.

Groceries.—The grocery trade with the United States is almost nominal, as the duties are so high as to be almost prohibitory.

The few things coming here are baking powder of a high grade and a few patented articles, while some canned goods, mainly peaches, and meats of various kinds, and some West Indian molasses, also a small quantity of tea, both the latter in bond.

There seems, I fear, to be little hope of increasing our business in this trade, as the Canadian national policy of very high tariff since its adoption has closed us out beyond recovery.

Hardware.—Hardware imported from the United States consists of saws, files, locks, and nearly all light shelf goods; plated cutlery, dry paints, whips, and agricultural and hand tools, on which articles the duty varies from 35 per cent. to 70 per cent., although the printed tariff reads only from 30 per cent. to 35 per cent. The Government has, however, instructed its officials to advance certain lines for duty, which brings them up to a very high rate. On scythes, for instance, by means of a specific and ad valorem duty, they have to pay 60 per cent. to 70 per cent. In most cases the Paint, Ore, and Drug Reporter and the Iron Age nominal prices are taken as a basis for duty, and as is well known their figures are only nominal and do not represent the actual discounts to large buyers. They never allow entry below these quotations, and in most cases raise

it even above them, which seems, to say the least, rather unjust, and might be looked into. We also sell here many patented articles in hardware—augers, chisels, &c.—besides fancy goods in this line. It may be noticed here that one firm in this city handles more plate and window-glass than any other house in the Dominion of Canada.

We had formerly a large nail trade—in fact controlled it—but it has been completely killed by the high duty demanded on them

Our gunpowder is preferred to what is made here, and much is imported; the duty, as in other cases, raised to about 60 per cent.

American cartridges and fixed ammunition are entirely used, and we altogether furnish at least 33 per cent. of the goods used in this line and in this market.

Hats, caps, and furs.—These three articles, particularly the two first mentioned, are very largely exported from the United States, probably amounting to 80 per cent. of the total trade.

In straw and felt goods we hold the trade, England furnishing a few very cheap lines only. Some furs of a cheap grade are also imported. A few seal-skin goods are bought of us, rubber coats, oil-skin (canvas), waterproofs; also a small quantity of home manufacture are sold, but are of an inferior quality. The English manufacturers of these goods do not change styles often enough and only have a trade in fine and expensive macintoshes.

We should give this trade more attention and do more to foster it.

Jewelry.—The jewelry trade is probably more largely and exclusively American than any other branch of business here.

In silver-plated ware we have almost the entire trade, though some goods are semi manufactured here by American firms, who find it cheaper to have branches and import their shapes in rough, and plate and finish on this side, thus saving most of the duty. In plated and rolled plate gold jewelry we stand unrivaled here, the styles being so varied, artistic, and cheap that they have created a demand for themselves and are in a great measure supplanting solid goods, as people would rather buy cheaper articles, so long as they look and wear as well as the real, and it allows them to have and wear a larger quantity, with more frequent change; consequently the market and sales are increasing.

Watch-cases, which formerly came from us, are now being made here and have superseded us almost entirely. As in them the material is the principal value, the trade cannot afford to pay a duty of 25 per cent. when the material is the largest item of value; or say the article or case cost $60, and material worth probably $40; there would be $15 for duty and $5 left for workmanship and makers' profit. This we cannot hope to overcome or to regain the lost trade.

Our watch movements are used almost entirely, supplemented by a few sloppy and exceedingly cheap Swiss ones; also a few fine ones from the same place.

There has been in the past a great deal of smuggling of these articles, as they are so small and the value so great, together with the duty of 20 per cent. has made it an inducement. The jewelers, I believe, intend to memorialize their Government to reduce this to 10 per cent., which would assist in stopping this practice and protect honest men from being undersold by unprincipled competitors.

Leather and findings.—We furnish this trade with many findings, including Dongola kid, shoe-lasts, ladies' hand-bags, valises, and trunks.

The latter item, if properly looked after at once, might get a large share of the trade, there being only four trunk factories in Canada, and they have just formed a combination, putting prices up 40 per cent. all

round, which makes their goods cost much more than ours, duty included Here is a rare and excellent opening for business if handled promptly. In the matter of oak leather, which is virtually a natural product of the United States, our tanners seem to show in all lines carelessness and consequently have no trade worth speaking of here. A case in point came to my notice while making inquiries in this line.

A roll of oak-tanned leather from Chicago, Ill., was received, bought, and duty paid on it as first-class goods; but upon being examined by the purchaser there were found to be four grades in it, and several of the hides were scarified like gridirons from wire-fence cuts on the animals before slaughter, and compared with the English butts, which are largely sold, were sadly to our disadvantage. We do not tan our leather as plump as the English, which this market demands, and consequently do not get the trade.

If our tanners would select the hides, tan them plump, and deal in good faith, the English would not be heard from, as we could easily undersell them; and as there is no oak bark in Canada and we have none else to compete with, should have and hold the trade entire, instead of doing some 15 per cent. of it, as at the present time.

While the larger houses buy direct from the factories, the smaller buy most of their French calf and kip in bond in the United States. We might look this up further and do more in it.

Stationery.—All the machinery used in book-making, bookbinding, and in the manufacture of paper boxes is of American make, as well as straw board, note papers, envelopes, twine, pen-racks, inkstands, files, and wrapping papers.

There was formerly a large business with us in pencils and pen-holders, in fact we furnished the market; but of late the Germans have come in and undersold us, and now hold the trade.

Probably about 15 per cent. of this trade is furnished by us, the average duty being about 25 per cent.

All the papers of a high class come from Scotland, and we will probably not be able to compete with them. The paper used for printing and newspapers is of home manufacture and well protected by duty.

American letter presses were formerly used here, but they are inferior to the Scotch, and have ceased to be sold.

Wood butter-plates are manufactured here by branches of American houses. Wax and model papers, tags, rubber bands, and slates are of United States make, and as with other articles are popular in the trade, which is growing; but as will be seen, it is mainly in knick-knacks, so does not amount to much in volume.

Seeds.—Our trade in this line is increasing at the rate of 10 per cent. annually, and we now sell over one-half the stock used in this market.

Garden-seeds, in which we may be said to lead the world, comprise about 35 per cent.; the remainder being made up of timothy, clover, and corn. About 4,000 bushels of the latter from Georgia and neighboring States is sold by one house here annually, and is grown and cut before maturity for fodder and ensilage for stock and dairy farming, which is a most important branch of business in this district. Four years ago one car-load of corn for seed for this purpose overstocked the market. This gives an idea of the growing popularity of this class of food for stock.

Early garden peas are largely exported from here to the United States, and the same might well and profitably be done in the cereals to Ohio and Southern States, as seed raised here in a colder climate would be found more hardy and improve our own grain crops, I believe.

Field vegetable seeds come almost entirely from England to this market, and the flower-seeds and bulbs from Germany and Holland direct.

The retail trade of London is also very important, as the county of Middlesex, in which it is situated, is the third most populous county in Canada, containing some 105,000 inhabitants in a comparatively small territory. London, being the center and largest city therein, is the natural market of the entire population, and is easily accessible from all points, while the nine railways running into it and the excellent stores bring many customers from a distance. And, moreover, as is elsewhere remarked, the retail trade in cities of this size is rather a better market for our goods than the wholesale, as the class of goods used is of a higher grade than used in country towns, which the wholesale trade supply, and most of the stores in this city are large enough to deal direct rather than pay a middle wholesaler profit.

There are also in the consular district at least a dozen towns, such as Woodstock, Ingersoll, Strathroy, &c., with populations varying from two or three to ten thousand inhabitants. These are, generally speaking, manufacturing towns, in all of which, however, we might do a share of the business.

In a future report I intend giving a description in full of this branch of Canadian business.

MANUFACTURING INTERESTS OF LONDON.

The manufacturing interests of this city are so remarkably important as to demand some notice. I attach a list of some of the most important branches, with the estimated capital invested in each. There are only eighty-eight on the list, but there are probably a hundred more, comparatively unimportant in size and capacity.

This is so large a subject that lack of space forbids my treating it in detail. I therefore reserve this for another occasion and special report, and close my remarks on the commercial importance of London by saying that the output of these factories is over $12,000,000 annually, which added to wholesale business, $8,000,000, gives the city of London a grand total output of $20,000,000 per annum. The output from neighboring cities and towns of my consular district would show an additional sum of $5,000,000.

Statement showing the various manufacturing industries carried on in city of London, Ontario, and estimated capital.

No.	Description.	Estimated capital.	No.	Description.	Estimated capital.
4	Agricultural-implement foundries	$500,000	2	Coffee and spice mills	$10,000
1	Baby-carriage manufactory	15,000	3	Engine builders	350,000
2	Biscuit and confectionery	250,000	6	Flour and grist mills	250,000
2	Boot and shoe	250,000	4	Furniture factories	300,000
4	Box-makers (paper)	10,000	6	Newspapers	100,000
3	Brass foundries	25,000	12	Oil refineries	1,500,000
3	Breweries	500,000	1	Piano	(*)
3	Brush and broom makers	25,000	1	Pottery	(*)
1	Car works	110,000	1	Scale	(*)
1	Carriage-body maker	(*)	1	Screw	(*)
10	Carriage factories	125,000	1	Soap	(*)
1	Chemical works	75,000	2	Stove foundries	250,000
9	Cigar factories	175,000	2	Tanneries	100,000
1	Clothing	(*)	1	Woolen mill	(*)

* Where there is only one firm in the business I have not thought it proper to give estimated capital.

HOW TO DO BUSINESS IN CANADA—GENERAL HINTS.

The proximity of this market to our own and the similarity of its demands make it rather a home than a foreign trade, hence it deserves more attention than any other outside market we sell to, and moreover its credit is better, payments more prompt and certain and more easily looked after than any other we deal with.

When it is contended that in sixteen hours and for a less number of dollars a salesman can reach this city from New York, it is rather astonishing more do not come. And, moreover, all large New York houses have Western travelers, who, in going to their territory, can make as quick a run from New York to Chicago via this place, and by stopping three days in Canada can make Toronto and Hamilton and London, which rank after Montreal in Canada as do Philadelphia, Boston, and Baltimore after New York in the United States.

I am aware there is a prejudice against this on account of trouble with Canadian customs, but if our merchants will send only piece samples that are not marketable they will have no trouble; or, if whole ones, let them pay duty, as they can easily dispose of them to the retail dealers and get out whole; that is, if they do not desire the trouble of bonding them.

Many American firms send men here either too late or too early in the season to secure the trade, seeming to think that when their travelers have nothing to do at home, or their season being over, they might as well send them to Canada. This is a great mistake. It must be remembered that in Ontario the season and climate correspond with Michigan and New England, and the time to strike the market is about the same time as the corresponding season just across the border.

Travelers sent here out of season can do no business, and they return home and report no orders, say there is no trade to be done, and give the market a bad reputation most undeservedly; this is just as it would be if a home market were worked out of season. Some merchants also seem to think that any kind of men will do for Canada, and consequently send young men here, mere boys, with loose habits, who cannot do any business at home or anywhere else on account of lack of ability, laziness, and want of fitness for the position and business.

Instead of doing this in a market where competition is close and keen, worked with first-class men from England always around and ready for an opening, they should send our best informed men and our best salesmen to meet and cope with them. And it is a fact I have noticed that the young and worthless commercial travelers are always complaining of bad business, whereas the old, energetic business men seldom fail to meet with success and leave with their order-books well filled.

I have just seen one of our American travelers who succeeded in obtaining an order for 20,000 pairs Club skates from one house. He was a sharp, shrewd man, or he would not have got it. For this kind of man there are more such orders, but they must be watched and worked for

HOW TO MEET THE REQUIREMENTS OF CANADIAN CUSTOM-HOUSES.

All American invoices should invariably be marked "Certified correct; no prison labor employed in manufacture." This to be signed by the firm of exporters from the United States. The failure of putting this on each invoice of goods sent here, it being required by Canadian custom officials, frequently results in the goods being detained until the invoice can be returned to shippers to be properly

certified. One house in New York lost an annual trade of $20,000 by repeated carelessness of shipper in this particular. Again, each case should be numbered, as it may be in bond and required to be taken out separately. A distinct set of numbers for each house who buys here should be used, instead of simply the number of the case in the order it was packed by the American firm of shippers. This plan is carried out by all large shippers from England to Canada. The exact terms of the sale should also be shown on the invoice, as frequently it reads net cash, while the terms are really sixty or ninety days. In a case of this kind, where no time is inserted, the Canadian customs add 5 per cent. to the invoice and charge duty thereon.

These items are important and should be carefully attended to if our merchants desire to build up and make a success of the trade of all kinds in this market.

I again desire to call attention to bonded business, which, let our merchants remember, they can sell almost every imported article they bring into New York in this market and make a profit thereon, as most of the retailers handling this class of goods buy from the Montreal wholesale houses, who make a profit thereon.

We can import foreign goods to the United States and reimport them in bond without paying United States duty, and lay them down here as cheap as the Montreal merchants, and make their profit.

Canadian customs are the most important factors in our trade with the Dominion, and the officers in charge are rendered overzealous sometimes by the fact that they receive, I believe, one-half of the proceeds of all seizures and fines, even though the same be made by themselves, and I understand some officers make more from this source than they receive in salary.

While their action in many cases may be justifiable, sometimes it is doubtful. The seizures are the means of establishing a higher rating, or other obstructions to goods coming in. Further, these seizures are always likely to be sustained by the commissioner of customs, as he on general principles desires to sustain his subordinate officers.

The actual prices paid for goods and the export discounts go for nought with them, and they only take as a valuation for duty such prices and discounts as are published in the trade journals of the United States.

CANADIAN CUSTOMS DISCRIMINATION AGAINST AMERICAN PRODUCTS.

Elsewhere in this report are samples of this as regards rubber shoes, table oil-cloths, and hardware, and I append another more striking case in detail, where we are certainly done an injustice by the customs authorities here. Full details are given, as the trade in Paris greens probably amounts to $500,000 per annum, and we should and would secure all the trade if treated as the most favored nation, our prices being really lower than theirs. I think this particular case should be at once looked into, and, if possible, corrected by the United States Government, as there is no doubt at all but that we are very unreasonably discriminated against in it.

In the United States they have a Paris green combination regulating the price for deep shade both for home consumption and export, the export prices being, of course, considerably less than prices for home consumption, and when we try and bring it into this country we buy at the low price and have to pay duty on the high or home price. This we understand, and possibly it is right enough and satisfactory, for it

applies to deep shade only, the only shade made in the American market.

To make the deep shade the manufacturers always have in each batch some that is off or inferior in color, and which in value is worth some 2 or 3 cents per pound less than the deep shade, and this particular quality is not offered or allowed to be offered for sale in the United States by the combination; consequently it is sold to Canadian buyers at 2 or 3 cents per barrel less than the combination price for the superior article. Thus the United States find an outlet for it. What we contend is, that the inferior article, not having an official list value, should be allowed to be entered at Canadian customs at the sworn invoice price, and not have to pay duty as per figures given herewith.

DEEP SHADE.

	200-keg lots.	100-keg lots.	50-keg lots.	Per pound.
	Cents.	*Cents.*	*Cents.*	*Cents.*
Combination price in United States for export	12	12½	13	14
Raised to list price of	15	15½	17	17½

OFF SHADE.

Invoice price of off-shade	10	10½	11	12
Duty paid on	15	15½	17	17½

Which shows that, regardless of cost or quality, the duty on first-class goods is always charged. This shuts out the American article every time when the appraisement of goods is thus rated; but the English article suffers under no such disadvantages, as, if the English invoice calls for price of 10 cents per barrel, that is all duty is collected on.

CANADA'S COMMERCE.

Having dealt with the trade of my own consular district, which is of comparatively small importance when compared with that of the whole country, the appended tables, which have never been published in the forms given, and were compiled from various sources by myself, are interesting and valuable, as they treat in a remarkably analytical way of the increase and decrease of trade to all countries and of the percentages of trade done by each and the percentage of Canada's exports thereto.

Some of the more important features which closely concern the United States are as follows, and proves that we may well be proud of leading all other countries in imports to Canada, and especially Great Britain. From the appended table it will be seen that by far the greatest part of the trade of the Dominion is done with Great Britain and the United States, the total trade with the two countries combined forming last year 88.92 per cent. of the whole external trade of the country; 38.10 per cent. of the total imports were from and 46.93 per cent. of the exports were to England, and 48.74 per cent. of the imports were from and 44.55 per cent. of the exports to the United States. The next largest amount of trade done was with the West Indies and South America, being 3.03 and 1.35 per cent., respectively, of the whole trade.

The exports to Great Britain exceeded the imports during the past year by $366,409, while the imports from exceeded the exports to the United States by $13,348,543.

The exports from Ontario and Quebec have been much greater in value than from any other of the provinces, and in 1885 they formed, combined, 74.32 per cent. of the total. In proportion to population it will be seen that British Columbia exports considerably more home produce than any other province. In 1882 the value was nearly $53 per head, and the exports both from New Brunswick and Nova Scotia, are in the same proportion of greater value than from Quebec and Ontario. The exports from Manitoba in the past year were $490,637 in excess of that of 1884, an increase of nearly 100 per cent.

The total value of home produce exported in 1885 was 16.22 per cent. per head, being 52 cents per head less than in the preceding year and $2.40 per head less than in 1881.

We have, however, to regret that our trade should show the greatest decrease, $5,393,844, or 9.22 per cent., more than double that of Great Britain, our next greatest competitor, who loses $2,165,807, or only 4.05 per cent, of the total trade.

We further impair our handsome balance of trade by increasing our consumption of Canadian products by 2.35 per cent., or $912,194, while England gets still further ahead of us by decreasing her consumption of exports $1,838,522, or 4.25 per cent., which is really 6.60 of gain on us, and which, added to our decrease in loss of trade over her of 4.27 per cent., leave us 10.87 per cent. behind them at the end of the year. This is not pleasant to contemplate, and will not be if an active campaign for trade is begun, and for this purpose I have given hints, and by the method before quoted sought to show how and where it may be done. London is comparatively a small market, but it is an index of the condition of affairs throughout the Dominion, and the remedy suggested for this place will apply equally as well to our trade all over the Dominion.

Comparative statement of Canadian imports and exports from and to foreign countries for the years 1884 *and* 1885.

IMPORTS.

Countries.	Value.		Increase.	Decrease.	Rate per cent.	Per cent. of trade.
	1884.	1885.				
Great Britain	$43,677,143	$41,511,336	.....	$2,165,807	4.95	38.60
United States	58,489,121	53,095,277	.....	5,393,844	9.22	48.74
France	1,690,076	1,775,172	$85,096	.....	5.03	1.63
Germany	2,071,544	2,173,938	102,394	.....	4.94	2.00
Spain	393,182	298,314	.....	94,868	24.13	0.28
Portugal	50,796	64,603	13,807	.....	27.37	0.06
Italy	88,930	116,482	27,552	.....	30.98	0.11
Holland	306,399	358,905	52,506	.....	17.13	0.33
Belgium	468,861	506,228	37,367	.....	7.97	0.46
Newfoundland	781,190	350,398	.....	430,792	55.14	0.32
West Indies	3,430,472	3,475,066	44,594	.....	1.29	3.19
South America	1,697,456	1,214,904	.....	464,552	27.66	1.11
China and Japan	1,957,951	2,557,821	599,870	.....	30.63	2.35
Australasia	1,975	2,231	256	.....	12.96	.....
Switzerland	240,433	221,176	.....	19,257	8.00	0.20
Other countries	1,069,514	1,219,635	150,121	.....	14.03	1.12
Totals	116,397,043	108,941,486	.....	7,455,557	6.40	100.00

Comparative statement of Canadian imports and exports, &c.—Continued.

EXPORTS.

Countries.	Value.		Increase.	Decrease.	Rate per cent.	Per cent. of trade.
	1884.	1885.				
Great Britain	$43,736,227	$41,877,705	.....	$1,858,522	4.25	46.93
United States	38,840,540	39,752,734	$912,194	.....	2.35	44.55
France	390,955	303,309	.....	86,646	22.42	0.34
Germany	195,575	264,075	68,500	.....	35.02	0.29
Spain	144,092	132,695	.....	11,397	7.91	0.15
Portugal	172,252	166,730	.....	5,522	3.21	0.19
Italy	247,151	147,550	.....	99,601	40.30	0.16
Holland	15,500	24,094	8,594	.....	55.45	0.03
Belgium	287,378	72,385	.....	214,993	74.81	0.08
Newfoundland	1,920,450	1,670,968	.....	249,482	12.99	1.87
West Indies	3,119,569	2,535,283	.....	584,286	18.73	2.84
South America	1,277,383	1,461,206	183,823	.....	14.39	1.64
China and Japan	60,979	29,918	.....	31,061	50.94	0.03
Australasia	502,181	415,887	.....	86,294	17.18	0.47
Other countries	496,264	383,822	.....	112,442	22.26	0.43
Totals	91,406,496	89,238,361	.....	2,168,135	2.37	100.00

My own conception of my duties as consul has led me to pay particular attention to the commercial relations and interests of the United States, and to find and keep open all existing trade, and wherever possible to create new business and make room for more of our goods and productions. To this end, during the past year I have written several hundred letters to merchants, manufacturers, inventors, and others, and in all cases have had pleasant acknowledgments and thanks, and generally they have acted upon my information and have either sent agents over, or through me have opened negotiations with the parties here.

One firm of American water-works contractors are figuring on and bidding for $1,000,000 of work, solely through my introduction and assistance, as it was a field they had never before been in and knew nothing of its opportunities.

I have also introduced several American inventions and patents, and they seem to take very well. In fact, since our nation leads the world in inventive genius, some recognition should be had for that most important class of men, and I believe that if a copy of the Patent Office Gazette were furnished to each consulate and kept on file there, it would greatly assist these excellent men and often sell their foreign rights, where, for want of knowledge of the requirements of the people of foreign countries, they as a rule lie dormant and unremunerative. Any of our consuls, by glancing over this publication, might see something that by simply calling the attention of the foreign manufacturer and referring him to the inventor would probably result in a sale.

It is my will to keep always on file American produce market reports, and I find it greatly to the advantage of shippers, frequently resulting in consignments that otherwise would not have been made for lack of knowledge of prices.

I have, ready to forward to the War Department through the Department of State, a wheel and a revolver that have been laid before the British Government for adoption, both of which strongly recommend themselves on account of efficiency and simplicity.

I have also placed in hands of reputable real-estate men here, lands in Florida and Georgia, and their purpose is to organize colonization companies which will greatly benefit the sections named, and will absorb a proportion of the annual emigration from this place and direct it to a section where it will do much good.

WM. D'H. WASHINGTON,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY.
London, February, 1887.

OTTAWA.

Report of Commercial Agent Hotchkiss.

AGRICULTURE.

This can in nowise be considered an agricultural district.

The few farms upon the meager minimum outcropping of tillable soil, which is here and there to be found between the mountains in the smallest of valleys, are utilized for the local support, to their fullest extent, but more farm produce is imported than produced in the district. None is exported.

The large lumbering interests which are here concentrated require more farm produce than many sections of treble its population, the consumers being out of all proportion to the producers.

Cattle and hogs are brought here in large numbers, as likewise are butter, cheese, and flour in noticeable quantities, while barrel pork is imported by the thousands, mainly from Chicago, for the requirements of both city and the lumber camps.

PORK BARRELS OF PRISON MAKE.

In connection with the subject of the importation of pork from the United States, I would call attention of the Department to the clause of the Canadian customs act prohibiting the importation into Canada of any article made in whole or in part by prison or convict labor.

Some time since information was laid with the customs department to the effect that the pork barrels from Chicago were the production of the convicts in the Joliet prison.

I am warranted in saying that any case brought to the notice of the department, with sufficient proof to warrant the seizure and confiscation, of the merchandise and packages will follow, and possibly the additional fine of $200.

The Government has been very lenient in this respect in the early operations of the law—since March 27, 1885—but are not disposed to extend its clemency, for prudential reasons.

Many articles brought in in ignorance of the law have been allowed to pass under orders of immediate exportation.

At the time of the passage of the act I had the honor to transmit a copy of the same to the department, and now allude to it as of seeming commercial importance.

IMPORTS OF WHEAT AND FLOUR.

The importations of wheat and flour into this district are in quite considerable quantities, though reliable statistics thereof are not at hand.

It is not unusual that heavy shipments of flour are made into Canada, manufactured in Minneapolis, and forced upon the Canadian markets even at Minneapolis prices, in order to assist in maintaining the market price at home, it being thought cheaper and more advantageous to lose money here than to depress prices or stop milling to cure the effect of a glut at the producing point.

This movement of American flour has been alluded to as a factor leading to the depression and unprofitableness of wheat-raising in Canada.

MANUFACTURES.

This district is not entitled to any standing for any variety of manufactures.

It produces nothing comparatively for exportation, except of the products of the forest.

An exception might with propriety be made in the single case of one enterprising American, Mr. E. B. Eddy, who has erected, in connection with his large lumber interests, several large factories, in which he gives employment to about five hundred persons of both sexes, and through which he is enabled to utilize the large amount of offals from his saw-mills, in which he produces about 70,000,000 feet of lumber yearly.

These offals, which are sold for fire-wood by all other makers, are by him made up into matches, box shooks, tubs, pails, washboards, &c.

The duty of 35 per cent. confines their sale entirely to Canada, except the box shooks, of which his yearly shipments to the United States will foot a sum reaching nearly $50,000.

Considering that these productions of valuable manufactures—useful and standard necessities of every community—are made from material heretofore deemed worthless and still so treated by others, are in one instance made to represent a yearly value of a quarter of a million of dollars, allusion to it becomes significant.

Is it not also evidence of the characteristic shrewdness and economic virtue of the typical New Englander?

LUMBER MANUFACTURES.

Manufacture of white-pine lumber, lath, &c., is the leading industry of this district. I had the honor recently to report fully upon the merits and importance of this industry, both of this district and of Canada, which report was published in consular reports for September last, at which time the points of the industry were so thoroughly given that it is not deemed essential to repeat the history in this report.

A few additional particulars may, however, with propriety be added at this time.

There are about fifteen thousand persons, directly and indirectly, who are dependent upon this industry residing in this district. It has assumed proportions of large magnitude, and fills a position in the commercial world, as well as of local and Canadian importance.

Fully 800,000,000 feet of sawed pine lumber is produced, and in addition thereto many millions of laths, pickets, &c.

An approximate of the money value may be given at $125,000,000.

The aggregate capital employed in this industry in the district is about $70,000,000, which sum is said to approximate the amount employed in all other manufactures combined in the Dominion.

The largest item is embraced in the cost of the timber limits, under license from the governments of Ontario and Quebec, an absolute necessity to all large lumber enterprises. The area of timber limits under license on the Ottawa River and its tributaries reaches 17,000 square miles.

The production of hewn square timber, made in the woods, the full size and length of the tree, which for many years has been so large and important a feature of the product of Canada, has fallen off immeasurably, while that of sawed lumber has correspondingly increased.

The European demand for square timber has comparatively ceased, while the demand for sawed lumber is yearly augmenting.

About 10,000,000 cubic feet will cover the present production, as against 40,000,000 ten years ago.

The exportation of sawed lumber to the United States from this district shows a decline in value of nearly 20 per cent. from 1883 to 1884, and of 25 per cent. from 1883 to 1885 (fiscal years). The quantity exported will not show a decrease. Prices on the different grades and varieties showing no decrease, it necessarily follows that this decrease of values arises from the fast depreciating quality of the production.

This I am also prepared to confirm from observation and knowledge.

There is a possibility that a change in the route of transportation may in part account for a reduction in volume of exportation.

The method of keeping the "invoice-book" in the consulates is such, that no distinction is made in entering those certificates made "in bond for export" from those which are for duty and consumption.

That a large increase in the shipment hence to Montreal and Quebec, for exportation, of lumber which has formerly passed to the seaboard through the United States for exportation is steadily transpiring there is no question.

The consulate records and returns therefrom certainly do not show the true value of merchandise going from Canada to the United States for consumption.

THE MINES.

The only mining industry now flourishing in the district is that of "apatite" or "mineral phosphate." The condition of this industry has not as a whole been quite as favorable as last year. The output shows a slight increase over 1884, being about 25,000 tons. The shipments have kept fair pace with the production, but at a decrease in market value of $3 to $5 per ton. The price has varied from $8 to $12 per ton, as against $12 to $16 in 1884. The demand for this rock phosphate is, and thus far in its history has been, mainly European. It is stated that the agricultural communities of the Old World have not been so favorably conditioned as to enable them to purchase fertilizers as freely as in previous years, and hence the slow demand upon the producers.

Your consul in November last made a lengthy report upon this industry, and endeavored therein to awaken an interest both on the part of the American dealers in fertilizers and the agricultural community at large.

This report was copied quite freely by the public press throughout the United States, and I am happy to say that the object was attained to a very gratifying degree.

Scores of letters of inquiry were received at this post, following the introduction of the subject, and probably 1,000 tons, in small lots, were ordered shipped both to the Eastern and Western States, mainly for experimental purposes, quite favorable reports and increased orders being the sequence. The final result will only become public when it is determined at how low a cost the sulphuric acid necessary to its treatment can be produced in the States or even in Canada.

This mineral in its natural state is 70 to 90 per cent. tribasic phosphate of lime, and when ground to an impalpable powder and treated by bath in sulphuric acid it is made one of if not the richest fertilizer of any known commercial character.

It is now shipped to Europe under the supposition that the requisite acid can only be produced there at a cost sufficiently low to warrant its transportation twice across the ocean.

This question being the only open one respecting its adaptability by the American agriculturists will, I think, find its solution during the coming year.

About six hundred men and boys are employed in this enterprise, which is in its infancy, receiving about $1.25 average pay per day.

About two millions of capital are invested in the business, one-half of which is American.

Two mills for grinding have been put in operation by Americans, and using American-built machinery.

The business is in a healthy and progressive condition and bids fair to become one of the leading industries of Canada, as the supply is virtually inexhaustible.

OTHER MINING.

All mining of iron ores has ceased.

It is claimed that the United States tariff of 75 cents per ton will not admit of its exportation to the States. So close is the handling of iron ores that they will not admit of any taxation whatever.

The Dominion Government, to aid and foster the iron industry in Canada, pays a bounty to the producers of pig-iron of $2 per ton.

No other minerals which warrant the attention of capitalists or operators are found in this district.

SHIPPING.

The tonnage of and coming into this district is composed of small inland steamers, canal-boats, and barges, but the aggregate of this class of tonnage registered and entered in customs at Ottawa will reach 80,000 tons.

Being located 120 miles due west of Montreal, and 52 miles north, inland, from the Saint Lawrence River, its water facilities are canals and the Ottawa River, on which it is situated. There are no means at command to show what proportion of the tonnage arriving at this port is of American ownership, but I may safely place it at one-half.

The American boats usually come here loaded with coal, some light, but all depend on the lumber and lath for their return load.

INLAND WATER ROUTES.

This character of transportation is in part done by the Rideau Canal, starting from the Ottawa River at this point and running directly through the heart of the city, where, at its outer limits, it forms a

junction with the Rideau River, which has been improved sufficiently to permit of the passage of craft drawing 4 to 5 feet of water. This river is followed to its junction with the Cataraqui River, which has likewise been improved, and thus is provided a water-way to the city of Kingston, on the Saint Lawrence, a distance from Ottawa of 126 miles.

In thus passing from Ottawa to Kingston there are thirty-three locks which ascend and fourteen locks which descend. Total rise, 282 feet; total fall, 164 feet. Depth of water on the sills, 5 feet.

This canal was originally built by the Imperial Government and subsequently made over to the provincial government. It was finished in 1832 at a cost of $3,912,000. It is of a most substantial character, the locks being of dressed stone in large blocks and thoroughly constructed. Its limited capacity in depth, however, is a serious drawback to its adaptability to cheap transportation. A tariff of tolls is charged.

As a further means of outlet by water the Ottawa River has been improved sufficiently to admit of the towing by small steamers of loaded boats down the river to Grenville, a distance of 60 miles, where a system of canals commences, running around the natural obstructions until the Saint Lawrence River is reached at Lachine; thence river to Montreal, with a canal branch also to that city.

RAILROAD FACILITIES.

The conveniences of railroad transportation are through the agency of the Canadian Pacific and Canada Atlantic Railways, both of which have laid their tracks into the heart of the lumber district of Ottawa and have provided first-class accommodations therefor and at all seasons of the year.

It would appear that these two roads were moving one-half the output of lumber, capable as they are, through their connections with the roads in the United States, of placing their freight in any part of the country.

ABANDONED PUBLIC WORKS.

The Canadian Government a few years ago began the improvement of the Ottawa River westward from Ottawa, with the design of opening up a water-way to Lakes Huron, Michigan, and Superior by means of the Ottawa and French Rivers and Lake Nipissing. This undertaking, after being under discussion and furtherance for a considerable period, was finally abandoned after an expenditure of over $1,000,000. According to a report made by a Government engineer of the cost of the completion of this scheme it would have involved about $24,000,000. A canal 6 miles long would be required to surmount the Chaudiere Falls at Ottawa, which are a barrier to continued river navigation above this city (and from which the valuable water-power of the city is derived). Another canal 3 miles in length would be necessary to overcome the Chats Falls. This work, called the Chats Canal, was commenced in 1854 and abandoned in 1856, after an expenditure of $483,000. I feel warranted in saying that this work will never be resumed.

The Culbute Canal, was built in 1876 and intended as a link in thiis continuous inland system to the Great Lakes. This canal was above the Joachims Rapids. It has also been abandoned as a Government work after an expenditure of $314,000, but will probably be maintained and utilized by private enterprise.

In view of the separate and open abandonment of these important links in a proposed system and the completion of the Canadian Pacific

Railway through the same section, coupled with the enormous amount of Government aid which this railway has received, being in the neighborhood of $100,000,000, it is at least reasonable to predict that this canal project, if not all further ones, has received the seal of its doom for all future time.

AMERICAN BOATS IN CANADIAN WATERS.

Very few Canadian boats can, by reason of excess of size, enter the United States canals. The few that it might be desired to so enter are, however, debarred by law, to which a frequent demur is heard. This of course throws the carrying business to the United States into the hands of the American boatmen, who are allowed the privileges of Canadian waters on an equal footing in every respect with Canadian boats.

Careful inquiry has been made in this respect, even among the boatmen themselves, and I have failed to learn that American boats in inland Canada waters are subjected to any character of charges or taxation not imposed upon Canadian boatmen.

But one complaint has been entered in this office during the season of 1886 by American boatmen, which was in effect as follows:

American boatmen coming into the waters of Canada from Rouse's Point make their first report and entry inward at Saint John's, paying $1 fee therefor. On arrival at Ottawa, their objective point, they are again obliged to make "inward entry" and again pay the $1 fee. On departing they pay $1 fee for "outward entry" at Ottawa, and 25 cents 25 cents for visa of permit at Saint John's. That they should be compelled to enter twice and pay twice they feel to be a grievance. Your consul will look into the matter before the opening of navigation in 1887.

IMPORTS.

The values of the imports at the port of Ottawa for the fiscal years of 1883, 1884, 1885, 1886 are as follows:

1883	$1,562,344
1884	1,514,636
1885	1,530,575
1886	1,579,255

The character of the imports into this district may be approximately learned by the following summary of articles, fully one-half of which articles are the produce of the United States, and this showing and statement will also hold good for the entire Dominion:

Acids.
Agricultural implements.
Ale, beer, and porter.
Animals.
Books, pamphlets, &c.
Brass, and manufactures of.
Breadstuffs, viz: Grain of all kinds, flour and meal, rice, and all other breadstuffs.
Candles.
Chicory.
Coal of all kinds, and coke.
Coffee from United States.
Copper, and manufactures of.
Cordage of all kinds.
Cotton, manufactures of.
Drugs and medicines.
Earthen, stone, and china ware.
Fancy goods.
Fish.
Fruit, dried.
Fruit, green, &c.
Furs.
Glass and glassware.
Gunpowder and explosive substances.
Hats, caps, and bonnets.
Hops.
Iron and steel, and manufactures of.
Jewelry and watches, and manufactures of gold and silver.
Lead, and manufactures of.
Leather, and manufactures of.
Marble and stone, and manufactures of.
Malt.
Metals, composition, &c., and manufactures of.

Musical instruments.
Oils, kerosene, refined petroleum, &c.
Oils, all other, n. e. s.
Paints and colors.
Paper, and manufactures of.
Perfumery, &c.
Provisions, viz: Bacon, hams, shoulders, sides, beef, pork, mutton, butter, cheese, lard, &c.
Salt, coarse (not imported from Great Britain or British possessions or for Gulf fisheries), and all fine salt.
Seeds.
Silk, manufactures of.
Soap of all kinds.
Spices, ground and unground.
Starch.
Spirits of all kinds.
Wines, other than sparkling; wines, sparkling.
Sugar, above No. 14, D. S.; sugar, equal to No. 9, and not above No. 14, D. S.; sugar, below No. 9, D. S.; sirups, cane juice, &c.; melado, &c.; glucose and sirups; molasses.
Tea from United States.
Tobacco and cigars.
Wood, and manufactures of.
Woolen manufactures.
Wool, Class 1, viz: Leicester, Cotswold, Lincolnshire Down combing wools, or wools known as luster wools, and other like combing wools, such as are grown in Canada.

EXPORTS TO THE UNITED STATES

The value of the exports (principally lumber) for the fiscal years 1883, 1884, 1885, and 1886, as shown by Canadian statistics:

1883	$2,444,723
1884	2,536,921
1885	2,628,729
1886	2,099,897

Value of the exports to the United States for the same period by the records of this office for the fiscal years 1883, 1884, and 1885:

1883	$2,470,287
1884	2,895,173
1885	2,309,419
June 30. 1886	2,225,710

Statement showing the declared value of exports from the consular district of Ottawa to the United States during the four quarters of calendar year ending December 31, 1886.

Articles.	Quarters ending—				Total.
	Mar. 31.	June 30.	Sep. 30.	Dec. 31.	
Breeding animals	$5,335 50				$5,335 50
Box shooks	10,764 28	$9,452 34	$11,506 99	$9,092 63	41,416 24
Barley and buckwheat	321 00	1,205 62		4,061 71	5,588 33
Bones and glue stock	921 00			200 00	1,121 00
Butter				51 20	51 00
Doors and moldings	600 00	1,517 50	1,438 95		3,556 45
Eggs		74 97	502 79	178 36	756 12
Fence posts	215 85	145 33	29 10	571 29	961 57
Furs, manufactured				336 50	336 50
Gold sweepings	800 00				800 00
Horses	1,260 00	975 00	115 00	520 00	2,870 00
Hay	726 42				726 42
Hides and skins (green)	1,618 90	1,128 75	487 23	2,899 08	6,133 96
Hemlock bark		88 00		2,050 00	12,138 00
Sawn lumber	217,428 98	713,655 97	920,834 20	645,743 66	2,497,662 81
Sawn lath	3,228 88	6,403 96	16,699 63	10,422 38	36,754 85
Lambs				13,804 17	13,804 17
Mica				303 80	303 80
Miscellaneous	2,130 20	932 06	3,369 60	2,767 12	9,198 98
Match blocks		8,478 83	3,718 68	1,060 88	13,258 39
Phosphate (ground)		1,105 94	1,335 20	2,619 83	5,061 07
Paper pulp (wood)			1,463 20	2,070 00	3,533 20
Pickets	4,328 90	7,443 21	8,577 14	6,752 82	27,102 16
Poles (telegraph)	148 35	1,837 50	235 00		2,220 55
Poultry				681 20	681 20
Railway ties		5,722 60	12,303 12	1,461 00	19,486 72
Shingles		855 76	228 65	848 03	1,932 44
Settlers' effects	5,561 00	7,374 00	6,067 00	3,772 00	22,774 00
Totals	255,389 35	768,397 34	988,911 48	712,867 86	2,725,566 03
Preceding year	124,483 01	777,947 62	719,418 39	441,731 16	2,063,580 18
Increase	130,906 34		269,493 09	271,136 70	661,985 85
Decrease		9,550 28			

The discrepancies between the Canadian statistics and the records of this office for the years 1883 and 1884 are only explainable on the hypothesis that shippers have neglected to take out the necessary "outward entry" as required by the customs department.

It is admitted that the department has been lax in its duty in this respect in the past, and to remedy the evil on the part of shippers a fine is now imposed upon the shipper of $200 and upon the carrier of $400 for neglect of this provision of the law.

In 1885 the statement shows the excess of $319,000 in favor of the Canadian statistics, which is unquestionably accounted for by the sum of the foreign shipments other than to the United States and which would not appear in the records of the United States consulate.

A system of monthly comparisons of the records of the customs department with the records of this office is proving of benefit to both parties, as showing to each who are the shippers that are derelict in their duties.

It would superficially appear that the entire exports from this port were to the United States, but owing to the location being above and away from the maritime port, all its foreign exports must of necessity go to such ports for embarkation, hence the values of such shipments become a part of the statistics of those other ports, as it is there the outward entry is usually made in customs, from which the statistics are made up.

Five millions of dollars, I am informed, may therefore rightly be added to the exports of Ottawa, decreasing Montreal and Quebec in a corresponding degree.

REMARKS.

Statistics, as a rule, are uninteresting, but should always be reliable, lacking which element they become valueless.

The export trade of Canada is pregnant with interest to one who cares to look below the surface. And the import trade is susceptible of being made a study of interest and profit by the commercial people of the United States, and I am promising myself the pleasure of making this a subject for a series of consular commercial reports in the near future, as time may admit.

Taking the intimated "glance below the surface" at the past and present exports of Canada, I append a statement of the total exports from 1873 down to 1885, which are the basis of the suggestions that accompany them, and which, though legitimately forming no part of an under consul's annual report, may not prove wholly valueless or uninteresting.

Retrospect of Canadian exports.

Year.	Amount.	Year.	Amount.
1873	$89, 789, 922	1880	$87, 911, 458
1874	80, 351, 928	1881	98, 290, 823
1875	77, 886, 979	1882	102, 137, 203
1876	80, 966, 435	1883	96, 885, 804
1877	75, 875, 393	1884	91, 406, 496
1878	79, 823, 667	1885	89, 238, 361
1879	71, 491, 255		

It will be observed that in thirteen years there has not only been no increase, but an actual falling off of over a half million of dollars transpires in 1885 over 1873, and with a few spasmodic exceptions the decrease is palpable.

Notwithstanding the population has greatly increased (not less than one-quarter), and that during the above period Manitoba and the Northwest Territories have been added to the producing and exporting area, Canada can hardly say that she has held good her position in her efforts for trade and commerce with the outer world.

Again, her exports to Great Britain in the following years show evidence of a loss of trade with the mother country:

1874	$45,003,882
1878	45,941,539
1885	41,877,705

The Canadian imports from Great Britain for the years 1873 and 1885, when contrasted), surely have a depth of meaning, and which I believe is evidence of a growing independence, through its own ability to supply its individual necessities. The amount of its imports for the years named is as follows:

1873	$68,522,776
1885	41,466,777

The value of Canada's imports from the United States in the same years also has an interesting aspect:

1873	$47,735,678
1885	47,151,210

The above exhibit would indicate a loss of 40 per cent. of Great Britain's commercial trade with Canada in the space of thirteen years, while in the same period the loss to the United States is merely nominal.

In these exhibits are shown only the value of merchandise entered for consumption.

It is certain that Canada, under her present protection policy, has through her manufactures, which are constantly and rapidly increasing, become to a degree independent of other countries or people in the matter of many very important classes of production, but it is also certain that the preferences of a very large class of her people and merchants are with the Americans and for goods of American manufacture, which preference is constantly augmenting, and needs only to be correspondingly fostered.

Still another point for reflection is very observable in the great difference in duties paid upon imports from Great Britain and those from the United States.

As shown, Canada imported from Great Britain in 1885 $41,406,777, paying duties thereon $7,617,249. In the same period it imported from the United States $47,251,201, paying duties thereon $6,636,405—nearly $6,000,000 greater value and $1,000,000 less duties.

As the tariff of customs duties is the same for all, no matter whence the merchandise comes, this indubitably shows us that the classes of merchandise covered by the "free list" has in the far greater degree come from the United States.

A very popular belief is prevalent with a large class of American producers that they cannot compete successfully in Canada with Great Britain, under the supposition that Great Britain can place her productions in Canada free of duty, while the tariff rates must be paid on the American importations.

While this ignorant delusion exists it will but prove a serious drawback to the extension of American enterprise and efforts for the trade of Canada. I could hope that this important point might be kept a live one before the American people.

POPULATION, ETC., OF OTTAWA.

The city of Ottawa contains about 35,000 inhabitants. The suburbs of the city, covering several enterprising villages, contain about 20,000. The district may be placed at 150,000.

The city is quite cosmopolitan in its character. The fixed population may be said to be half French and half English speaking.

Ottawa being the seat of government of the Dominion, and comparatively in its infancy, a few general statistics may not be uninteresting.

Ottawa City was created January 1, 1855, and was selected by Her Majesty as the seat of the Canadian government December 31, 1857. The department buildings were commenced in 1863.

The first session of the legislature of Canada held in Ottawa was commenced on the 8th of June, 1866. During this session confederation was adopted, comprising Ontario, Quebec, Nova Scotia, and New Brunswick.

The amount expended by the Government on the parliamentary and departmental buildings up to June 30, 1885, was $4,205,461, for construction and $1,421,813 for repairs, showing, from the time of their completion, only nineteen years, an expenditure for repairs equal to one-third their original cost.

This is a very remarkable showing when it is considered that all the erections are built of stone, and apparently in the most substantial manner.

The annual expenditure now for repairs and maintenance of buildings and grounds, &c., is about $120,000.

One departmental building is now in course of erection, supplemental to the above, the cost of which at completion is estimated at $550,000.

INCREASE OF POPULATION AND VALUATION.

The increase of its population and valuation has been continuous and healthy, but in no way phenomenal.

The following table will show the population, assessment, and rate of tax for the years named, the assessment being on the basis of full value:

Years.	Population.	Assessment.	Rate.	Years.	Population.	Assessment.	Rate.
1871	.....	$5,970,479	$1 53	1879	23,789	$11,053,437	$1 91
1872	.....	7,877,184	1 51	1880	24,025	10,274,735	1 92½
1873	.....	8,958,708	1 76	1881	25,623	10,392,275	1 90
1874	.....	9,670,720	1 90	1882	26,228	10,628,220	1 92½
1875	.....	11,584,795	1 81	1883	27,645	10,768,492	1 94
1876	.....	11,713,470	1 77	1884	30,791	11,105,025	1 97½
1877	.....	13,168,570	1 95	1885	32,857	11,545,735	1 93½
1878	.....	12,519,995	1 92½	1886	34,750	12,750,000	2 18½

Not until 1879 was any registered returns of its population made, but since which date its permanent growth is very apparent.

It will also be observed that the rate of taxation at the present time is fully up to a figure which superficially tells of improvidence in expenditures.

It is but justice, however, to state that the cost of the Holly system of water-works built and maintained by the city is the greater sum of

the city's indebtedness, and which gives an annual income of $122,000 and is gradually increasing. In addition to its direct income from this source the city has the benefit of the system for fire purposes (under a pressure of 100 to 110), which benefit alone, for a wooden-built city, is incalculable, as also an absolute requisite.

THE PUBLIC DEBT.

The city debt stands at $2,400,000.

ASSETS OF CITY.

City water-works	$1,500,000
Credit of sinking fund	300,000
Real estate	327,000
Personal property	25,000
Total	2,152,000

It is believed that the water-works would sell for full $2,000,000.

PRICES OF FOOD AND GENERAL LIVING.

The market prices for those necessaries which enter into the daily wants of every community are not subject to violent fluctuations, but are controlled by the supply thereof.

The principal source of supply comes from the market gardeners and small farmers, who, for many miles around the adjacent country, cater to the city wants on the limited arable sections which they may possess. The root crops the present season are sufficient for the wants of the people except in potatoes, and with this exception no notable change exists in prices.

Meats are of home production and raising to a large extent. The grass is excellent and abundant, which, with the area of hill and bush to roam and browse, gives an excellent opportunity for raising stock at a minimum of cost.

It will be observed that the prices of vegetables and meats, which will be quoted, are quite reasonable; indeed, it is only in the line of these articles that prices and cost of living in this city bear any proportion to the rates of wages or ordinary incomes.

Without particularizing, I may safely assert that I know of nothing outside of food which, in my judgment, does not carry higher prices and values than in New York City, or throughout New York State.

There need be no fear of smuggling into the United States of any ordinary merchandise purchased in Canada if Ottawa prices prevail throughout the Dominion, as in most articles, such as furs, clothing, boots and shoes, cottons, print goods, &c., the retail prices of these articles are fully 25 per cent. above those prevailing in the principal markets of the United States, and in very many instances 50 per cent.

In butter and cheese this district is far behind its real ability to produce, and for a really good article an excellent price is obtained, a fine quality of butter selling for 25 cents, the bulk of the production being brought from other parts of the province. During the winter of 1884–'85 butter of good table quality brought as high as 45 cents, the ordinary range being 16 to 22 cents.

Average retail prices—groceries, meats, &c.

Articles.	Average price.	Articles.	Average price.
Bread.....per loaf..	$0 12	Fresh fish .....per lb..	$0 10
Tallow candles..... per lb..	08	Petroleum oil:	
Butter:		American .....per gal..	35
Salt .....per lb..	$0 16 to 22	Canadian .....do....	25
Fresh .....do....	20 to 25	Coffee:	
Cheese..... do....	15	Ground.....per lb..	35
Eggs .....per doz..	15 to 20	Mixed .....do....	$0 15 to 20
Flour.....per 100 lbs..	2 50 to 3 00	Beef .....do....	12½
Buckwheat .....do....	2 50	Mutton and veal.....do....	10
Corn meal.....do....	3 50	Pork and venison .....do....	12½
Oat meal.....do....	3 50	Bacon.....do....	12½
Rice ..... per lb..	04	Hams ....do....	15
Sugar:		Dressed chickens .....do....	08
Brown.....per lb..	05½	Dressed turkeys .....do....	12½
Granulated ..... do....	06½	Dressed geese .....do....	08
White .....do....	07½	Dressed ducks .....do....	12½
Molasses .....per gal..	33	Beef .....do....	04½
Bar soap .....per lb..	06	Mutton, lamb. .....do....	04
Salt, table..... .....do....	02	Veal .....do....	04
Teas, average .....do....	45	Cord wood:	
Potatoes.....per bush..	50	Hard.....per cord..	4 50
Beets .....do....	40	Soft.....do....	3 50
Turnips.....do....	40	Anthracite coals.....per ton..	5 50 to 7 00
Cabbage .....each..	05	Timothy hay.....do....	12 00
Onions:		Clover hay .....do....	10 00
White.....per bush.. }		Wheat and rye straw .....do....	6 00
Red.....do.... }	1 00	Winter wheat ..... per bush..	80
Silk .....per qt..	06	Oats .....do....	30
Salt cod .....per lb..	04	Buckwheat .....do....	40

LABOR.

No great variety of mechanical labor is employed in this district, but for such as is required the supply has been fully equal to the demand, with no apparent surplus, and there has been during the year no friction or disturbance in the labor market.

The rates paid for mechanical labor are somewhat less than in the cities of equal size in the United States, ordinary day labor, unskilled, being the exception.

Average rates of wage-labor.

Occupation.	Wages.	Occupation.	Wages.
Female house servants, per month.	$6 00 to 12 00	Gardeners, per day	$1 25
Male house servants, per month..	15 00 to 18 00	Female cooks, per month.....	$8 00 to 12 00
Coachmen, per month.....	22 00	Laundresses, per month.....	6 00 to 12 00
Masons, per day.....	2 50	General laborers, per day	1 25
Bricklayers, per day.....	2 50	Miners in phosphates only, per day.....	75 to 1 25
Carpenters and cabinet-makers, per day	1 50 to 2 50	Mill hands, per day.....	1 00 to 1 50
Blacksmiths, per day.....	2 00 to 2 25	Saddlers and leather workers, per day.....	1 50 to 2 50
Lumbermen, and board, per month.	15 00 to 25 00	Boot and shoemakers and tailors, mostly by the piece.	
Lumbermen, per day.....	1 25 to 1 50		
Wheelwrights, per day.....	1 00 to 1 50		
Gardeners, with board, per month.	16 00 to 20 00		

GENERAL CONDITION OF PEOPLE.

As a rule the people are apparently happy and contented. Strict economy in expenditures and mode of living is an absolute necessity on the part of the labor and trades people, as in the matter of rents and the cost of living generally the expense is in disproportion to incomes. This is generally understood to be a consequence of the capital location.

The tastes and habits of the people, however, lead them to adapt themselves to the circumstances which surround them. As a rule the lower classes are lacking in that refined taste and judgment in dress (both in the selection of colors and material and in their harmonizing combinations) which characterize the masses in the United States, nor do they exhibit that peculiar knack and tact of turning (in dress and other little things) their little nothings into tasty, natty, stylish something, like their more enterprising neighbors.

IMMIGRATION.

The immigration into this district of foreigners as registered by the commissioner of immigration for Ottawa is 1,297, comprising the following:

Nationalities.	Number.	Nationalities.	Number.
English	727	French	11
Scotch	80	Finnish	12
Irish	201	Hungarian	25
German	234		
Scandinavian	57	Total	1,297

The total capital reported as being possessed by these immigrants is $33,800.

Temporary relief was granted by the authorities to 223 of this number, viz, to 148 men and 31 women and 44 children.

Many of the immigrants coming into Canada very soon find their way into the United States.

It is a well-known fact that the Canadian authorities, under the auspices of the agricultural bureau, maintain a system of agencies in the Northern and Eastern States for the purpose of inducing emigration to Canada.

EMIGRATION.

The records of this consulate for 1885 and 1886 will be given, and respecting which I can say, from the personal conversations had with many of them individually as to the reasons of their leaving the country, that I found them in a frame of mind sour and bitter, engendered by increased taxation and cost of living. The majority have gone into the west, and were largely of the farmer class of the better sort, who had means to buy farms and who were desirable settlers.

Many of the emigrants sell all their effects here and go clean-handed, appearing to understand that they can as cheaply replace when they determine the actual spot of their location.

Emigrants from Ottawa to the United States, 1885 and 1886: Number of persons, 198; value of effects, $22,774.

THOS. W. HOTCHKISS,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Ottawa, January 15, 1887.

MEXICO.

GUAYMAS.

Report of Consul Willard.

TRADE.

The trade returns show an increase in the commercial transactions over that of the preceding year. Business operations continued more or less on the same basis during the first two quarters, but the last two quarters of the year an increased vitality is apparent.

The causes which operated against the commercial prosperity of this district in 1885 have now in the past six months been greatly modified; there has been no return of the "scourge" of yellow fever, and the Apache Indian raids from Arizona have entirely ceased. The Iaqui Indian war still continues, but will in a short time be concluded, in a manner satisfactory and favorable to the industrial interests of Sonora.

IMPORTS.

As mentioned in my report of 1885, American manufactured goods now occupy the position held by those of Europe fifteen years ago. By the courtesy of the custom-house collector at this port and Nogales (on the American frontier) I have obtained most of the data contained in the tables of imports and exports, which are approximately correct.

The imports from the United States and Europe have not varied as to the character and class of goods from that of former years:

From—	Imports in 1886.		
	By sea through Guaymas.	By rail through Nogales.	Total.
United States	$447,129 89	$427,092 61	$874,222 50
Europe	132,766 06	213,546 30	346,312 36
Total			1,220,534 86

The district of Alamos, in the southern part of this consular district, is supplied principally from the port of Mazatlan, and the amount can be estimated, the same as last year, at $200,000. Of this amount $50,000 can be classed as goods of American manufacture and $150,000 from Europe.

The contraband traffic across the border of Arizona into Sonora has decreased during the year, Apache Indian raids making this business dangerous, and, as the Mexican Government is exercising more vigilance, this year it is calculated it will not exceed $75,000. A recapitulation of the imports show as follows:

From United States by sea and through Nogales by rail	$874,222 50	
From United States by sea and through Nogales, via Alamos	50,000 00	
From United States via Arizona, clandestinely	75,000 00	
Total imports from the United States (approximate)		$999,222 50
From Europe through Guaymas by sea, and through Nogales by rail	346,312 36	
From Europe to Alamos	150,000 00	
Total imports from Europe (approximate)		496,312 36
Total imports (approximate) for 1886		1,495,534 86
Total imports (approximate) for 1885		1,581,940 29
Decrease in 1886		86,405 43

EXPORTS.

Exports from this consular district are sent almost exclusively to the United States by railroad and steamer. Silver ores have been exported in considerable quantities during the year over the Sonora Railroad and connections to Denver, in the United States (to the smelting works at said place), and from Alamos by sailing vessels to Mazatlan. The aggregate tons shipped of silver ore will not exceed 5,000 tons, valued, approximately, at $400,000. The amount of coined silver and bullion shipped from Alamos to Mazatlan for reshipment to the United States can be estimated at $300,000. Of coined dollars and bullion, cattle and fruits, taken across the border of Arizona frontier clandestinely no official data can be obtained. The number of oranges exported to the United States from this consular district by rail and other conveyances is estimated at 8,000 boxes of 150 to 250 oranges per box. Those by rail are mostly sent to Denver and Chicago. From custom-house and consular records:

Exports to the United States through Guaymas	$557,942 09
Exports to the United States through Guaymas by rail via Nogales	420,723 96
Exports to the United States through Alamos by Mazatlan	300,000 00
Export of ores from Alamos district via Mazatlan and by rail through Nogales	400,000 00
Total exports to the United States in 1886	1,678,666 05
Total exports to the United States in 1885	1,018,304 82
Difference over 1885, increase	660,361 23

Exports to Europe from this consular district are made indirectly through the United States.

NAVIGATION.

The following amount of tonnage is taken from the records of the captain of port at Guaymas and consular records. (The tonnage as mentioned is according to Mexican measurement, and gives an increase in tons over the measurement of the United States and England.) The total tonnage of vessels of all nationalities entering and departing from Guaymas during the year 1886 amounted to 48,270 tons; during the year 1885 amounted to 37,517 tons, showing an increase of tonnage in 1886, 10,753 tons. This is accounted for as follows: Several European vessels chartered to carry phosphates from San Pedro Island in the Gulf of California to Hamburg touched at Guaymas in ballast for orders and supplies and are entered in the captain of port's office. Among the arrivals and departures of vessels the Mexican Phosphate Company during the year had a steamer under the Mexican flag to carry water and supplies to their island for the workmen, and the arrivals and departures of the said steamer are also entered at the captain of port's office.

The French company working copper mines in Lower California have a steamer under the French flag, by special contract with the Mexican Government, and the arrivals and departures of this steamer are also entered at the captain of port's office. The foregoing explains the apparent increase of the merchant tonnage at this port. According to the record at the captain of port's office the following tonnage is given:

Nationalities.	Tons.	Nationalities.	Tons.
Mexico	8,844	Germany	2,684
United States	28,852	Denmark	392
France	3,200		
England	4,268	Total tonnage for 1886	48,270

There have been during the past year no important changes regarding the laws on imports, exports, and navigation. Although, as will be seen by the foregoing tables, that the consumption of American manufactories' goods are much greater than all others, yet there are but three American mercantile houses in this consular district whose sales amount in the aggregate to $150,000 per annum of imported American goods, the foreign commerce being in the hands of Mexican, German, and Spanish houses. There is no English importing house established in this consular district. American residents are almost exclusively engaged in mines and mining.

DOMESTIC TRADE.

Domestic trade between the port of Guaymas and the coasting ports as far south as Manzanillo remains more or less the same as mentioned in my last year's report. The articles exported from Guaymas to the Mexican ports south consist of flour, baskets, straw hats, mats, beans, and peas. Articles received at Guaymas from the Mexican coast are dried fruits, blankets, tobacco, sugar, soap, lard, rice, chocolate, and mescal, and can be estimated in values of the products at $500,000. The American steamer City of Topeka, engaged in the coast trade between this port and coast ports as far south as Manzanillo, was withdrawn from the service and ordered to San Francisco, the trade and traffic not being sufficient to warrant further continuance of said steamer in coast trade. The Mexican coast steamer Alejandro, of about 600 tons burden, was placed on this route, and is making semi-monthly voyages to the ports touched at by the City of Topeka. A small Mexican steamer, Porfirio Diaz, has also been placed on the route, making regular voyages to Guaymas from Mexican ports south. This steamer is less than 100 tons burden. The Mexican steamer Altata occasionally touches at Guaymas from Mazatlan. Should there be no return of the yellow fever in the coming year there is every reason to believe that the coasting trade and the traffic will increase. Regarding interstate and municipal duties (*derechos de alcabala*), this relic of the past, which has been an annoyance to trade, has now been abolished by law, and gives great satisfaction to the merchants on the coast.

STEAMERS AND SAILING VESSELS.

The California and Mexican Steamship Line's steamer Newbern, 677 tons burden, still continues making regular monthly voyages from San Francisco to Guaymas, touching, going and returning, at Todos Santos, Magdalena Bay, Cape San Lucas, Mazatlan, and La Paz. This steamer is under contract with the Mexican Government to carry the mails and receives the subsidy for this service of $1,500 for round voyage. The Mexican steamer Alejandro, before mentioned, engaged in coasting trade, carrying mails by contract of the Government, receives a subsidy of $1,200 monthly. The small steamers Altata and Porfirio Diaz also carry the mails, but receive no subsidies from the Government. The French steamer owned by the French Mining (copper) Company in Lower California, and the steamer M. Romero Rubio, owned by the Mexican Phosphate Company, are engaged exclusively in carrying supplies and workmen to and from their respective companies' works at Santa Rosalia and San Pedro Island (Gulf of California). The American sailing vessels arriving at Guaymas bring cargoes of lumber from California and Oregon. European vessels arriving at Guaymas are laden with merchandise from Germany and England. The return cargoes are of ores, dye-woods, and gypsum, from the coast, outside of this con-

sular district, and phosphate from San Pedro Island, in the Gulf of California. The Mexican sailing vessels on the coast are engaged exclusively in the coasting trade, none making voyages to foreign ports.

INTERNAL IMPROVEMENTS.

Nothing to note, remaining the same as mentioned in my last year's report. The Sonora Railroad which, as is known, connects this port with the United States at Nogales, Ariz., and connecting with the Arizona and New Mexico Railroad and Southern Pacific Railroad at Benson, has with few interruptions run daily trains the whole year. Report of the gross and net earnings of this road shows an increase over that of 1885. I am unable to furnish the exact data, as the same have not yet been published. The projected railroads from this port to the Sonora coal-fields of "Los Bronces" and "La Barranca," distant 120 miles, approximately, and that of Port Lobos, in the Gulf of California, to extend northerly to the Arizona frontier, 90 miles in length, for which franchises or concessions have been granted by the Mexican Govenment, and declared forfeited for non-fulfillment of conditions, have not been invalidated by the holders of the same, and there is at this time but little hopes that they will be.

TELEGRAPH LINES.

As mentioned in my report of last year, Guaymas is in direct communication with the United States by the telegraph line of the Sonora Railway. The Government line mentioned in my last year's report as uncompleted between this port and Alamos, distance 240 miles (to connect with the Mexican Government lines to the city of Mexico over national territory), has been completed, and Sonora now enjoys direct telegraphic communication with the national capital and all other States of the Mexican Republic.

MINING INTERESTS.

An increased interest has been manifested during the past six months regarding the mines of gold and silver in Sonora. Investments are now being made by English capitalists in the purchase of mines in different parts of this consular district (heretofore but few companies have been organized in England to work Sonora mines). In 1884 the Trinidad mines were purchased by an English company in the sum of $1,500,000. In November of the present year was purchased by an English company a mining property near the borders of Sonora, in Chihuahua, for the sum of $300,000, and in Sonora two more mines were purchased in the sum of $175,000, and in the present month the Mulatos gold mines, in this State, were contracted by an English company in the sum of $1,000,000. No purchases have been reported during the year of any mining property of importance in Sonora by American capitalists.

COPPER MINES.

The copper mines near the American frontier in Sonora, owned by American citizens, have an abundance of ores with a percentage of silver combined with the copper, and are now being worked, but not on a large scale. The copper mines owned by the Boleo Mining Company (a French company organized in France), situated in Lower California (90 miles opposite Guaymas, across the Gulf of California) have now their plant of machinery about ready to produce copper matte. This company have expended $600,000 in the erection of their works. The

amount of American capital invested in the mines and lands of this consular district will equal one-half of the foreign capital invested in the State.

The gross products of the mines is difficult to obtain or get an approximately correct estimate. It can, I think, be safely placed at 50 per cent. more than the amount of the exports.

IRON, LEAD, AND ANTIMONY.

There has been no effort made to develop the iron, lead, and antimony mines in Sonora.

COAL-FIELDS.

The coal-fields of Sonora, mentioned in former reports, still await systematic development; the partial developments all tend to confirm their value as an element of great commercial importance to Sonora.

MINING LEGISLATION.

A law has been presented to the national Mexican Congress in the last quarter of this year, and is now under discussion, having for its object the fomenting of the mining interest of the Republic and other industries, and was presented as a partial remedy for the depreciation of silver. Regarding mines, this law provides that for the term of fifty years coal, iron, and quicksilver mines of every description shall be free from all taxes and duties, and all products produced by them. No fees shall be collected for denouncements and possession necessary to acquisition of mines and mining properties and reduction works, nor on the organization of mining companies, or on titles, or on shares issued by them. The President of Mexico is authorized by this law for the coming ten years to form contracts, granting special privileges and ample concessions for mines and mining lands (not detrimental to the interests of a third party) to such companies who will guarantee the inversion of capital corresponding to the extent of the lands or zone granted for their working, the nature of the ores, and the circumstances of the locality, &c. The minimum capital to be employed by such companies is to be not less than $200,000. There is every probability that this law will pass Congress and become a general law of the Republic in the coming year.

POPULATION AND COLONIZATION.

There has been no material increase in the population of this district since my last report. The raids of the Apache Indians in the north of the district having now ceased it is expected that during the coming year an increase of population will follow in those districts now nearly abandoned. The Iaqui war in the southern part of the district, although not yet finished, will no doubt be concluded during the year, and that portion of the State which contains the best agricultural land on the coast will be open to colonists.

The Mexican Government in the last six years have made several colonization contracts with private individuals and corporations for the purpose of colonizing public lands on this west coast of Mexico (as mentioned in my dispatch to the Department, No. 771, of September last), but none of which have been complied with.

The Topolobampo colonization scheme, in connection with the Texas, Topolobampo and Pacific Railroad Company, under a franchise or concession from the Mexican Government, is now being carried out, as about 350 Americans (men, women, and children) are now there as colonists

under the leadership of Col. A. K. Owen, the projector of the enterprise. I am informed that some 4,000 colonists from the United States will be ready to start within the next six months to Topolobampo Harbor, on the shores of which the colony is to be established. This harbor is in the Gulf of California, in the State of Sinaloa, consular district of Mazatlan (and is about 200 miles southeast of Guaymas). At this time the nearest settlement is 15 miles distant, and as I am informed a large tract of land has been secured bordering on the shores of the Gulf, there should be no impediment to locating a site to the satisfaction of the projectors for a model city and colony. This colonization scheme differs in many particulars from others of its class as to the theory and principles on which it is proposed to establish it, and in the concession and franchise given by the Mexican Government no discrimination is made in favor of European colonists, which has generally been the case in the colonization concessions of Mexico granted for this west coast.

The reported influx of the Chinese into this consular district is without any foundation, as the number of Chinamen in Sonora, the same as last year, are estimated at less than 100, and are engaged as a rule in manufacturing shoes and as gardeners and cooks.

SANITARY CONDITION.

The sanitary condition of this consular district during the year has been, comparatively speaking, good until the second quarter of the year, when the smallpox made its appearance among the Indians in the Iaqui Valley, and has spread since then over the southern part of this consular district. The yellow fever did not appear on any part of the coast. The non-visitation of this disease after its appearance for three consecutive years gives hopes that it will not return.

CONCLUDING REMARKS.

The reported purchase by German capitalists of large tracts of land in Sonora has no foundation in fact. The colonization schemes of L. Huller & Co. (German) in connection with certain lands in Sonora and Lower California is based on American capital. No lands have been purchased by English capitalists in Sonora. The Sonora Land Company (an American organization) has acquired a large tract of valuable land along the northern part of Sonora for colonization purposes, and is now engaged in making surveys of said land. The Mexican Phosphate and Sulphur Company (organized in San Francisco) are actively engaged in exporting phosphates (petrified guano) from the islands of the Gulf of California, opposite Guaymas, and have, it is estimated, 50,000 tons of merchantable phosphates on the island of San Pedro, besides other deposits on different islands of the said gulf. The phosphate is exported to Europe in sailing vessels. The soft guano on the islands, which is found in large quantities, although inferior to the phosphates, yet has a commercial value. Shipments of this guano will be made the coming year to California. The outlook for the coming year is more favorable than any year since 1883. The problem so difficult of solution of Apache Indian raids from Arizona, which for years have devastated the northern part of Sonora, has been by the combined efforts of the United States and Mexico solved by the capture of the hostile Apaches and their banishment to Florida. The Indian Iaqui war is now about being satisfactorily concluded, and the non-appearance of the yellow fever gives the people of Sonora solid reasons for anticipating a greater vi-

tality in all industrial interests throughout this consular district and a corresponding increase of the commercial relations with this part of Mexico and the United States.

A. WILLARD,
Consul.

UNITED STATES CONSULATE,
Guaymas, December 31, 1886.

Imports at Guaymas, Mexico, for the year ending December 31, 1886.

Articles and whence imported.	Quantity.	Value entered.	Amount of duties.
	Pounds.		
From United States:			
Agricultural and mining implements	3,547,048	$106,298 75	
Drugs and perfumery	45,063	23,282 28	
Dry goods: Cotton, linen, and woolen	80,314	78,980 80	
Groceries	876,408	170,207 41	$329,916 23
Glass and earthen ware	24,763	7,233 63	
Hardware	25,193	10,774 23	
Miscellaneous goods	435,326	50,352 79	
Received by sea	5,034,115	447,129 89	
Received by Nogales, not specified		427,092 61	
Total from United States		874,222 50	
From Europe:			
Agricultural and mining implements	20,720	7,163 06	
Drugs and perfumery	80,339	12,382 00	
Dry goods: Cotton, linen, and woolen	97,600	49,683 18	
Groceries	125,021	24,958 61	194,063 83
Glass and earthen ware	26,122	6,664 81	
Hardware	41,436	12,290 90	
Miscellaneous goods	128,313	19,623 56	
Received by sea	519,551	132,766 06	
Received by Nogales, not specified		213,546 30	
Total from Europe		346,312 36	
Total from United States and Europe		1,220,534 86	

Exports from Guaymas, Mexico, for the year ending December 31, 1886.

Articles and whither exported.	Quantity.	Value, including costs and charges.
To United States:		
Bullion:		
Silver ..... cars..	36	$338,019 50
Gold ..... do...	4	37,846 61
Currency ..... cases..	2	5,990 00
Dollars, silver ..... sacks..	196	143,891 98
Gold coin ..... do...	3	6,595 00
Hides:		
Beef ..... pieces..	3,952	9,342 00
Sheep ..... pkgs..	29	240 00
Plumbago ..... sacks..	394	450 00
Phosphate ..... tons..		14,000 00
Red pepper (Chiltepin) ..... packs..	2	100 00
Seed, pamita ..... sacks..	1	25 00
Silver ore ..... do...	142	1,242 00
Wood, pine ..... pieces..	106	200 00
		557,942 09
Exports by rail via Nogales, not specified		420,723 96
Total exports by sea and rail		978,666 05
Export of gold and silver ores from Alamos via Mazatlan, and by rail through Nogales		400,000 00
Export of bullion of gold and silver from Alamos district via Mazatlan		300,000 00
Total exports, approximated		1,678,666 05

NOTE.—Exports to Europe are made through United States as a rule.

PASO DEL NORTE.

Report of Consul Brigham.

GROWING IMPORTANCE OF PASO DEL NORTE.

The location of this consulate on the frontier of Mexico and within a few hours' run, by rail, of many of the leading commercial centers of the Western States, makes it one of the most important in our consular system. While in a foreign country, it is just across the Rio Grande River from El Paso, Tex., one of the most enterprising and progressive cities of the Southwest, which is rapidly pushing its business into the interior of Mexico.

The peculiar location of Paso del Norte as the recognized gate-way into the Republic for the commerce of the United States, since the construction of the Mexican Central Railroad, by American capital, to the city of Mexico, has made it daily a more important distributing point for all the Northern Mexican States. This road, traversing 1,224 miles, through the very heart of the country, brings the commercial centers of the United States into close connection with the business circles of nearly the entire Republic. The facilities offered for travel and freight through this route are attracting what for years past, by slow means of transportation, followed the old Vera Cruz, Matamoros, and Tampico routes.

The rapidly growing business of the consulate is proof sufficient of the energy and enterprise of the American people, who are developing a trade that has been almost dormant until five years ago, when railroad communication made business possible.

Paso del Norte is situated in that portion of the State of Chihuahua lying in the Zona Libre, or Free Zone, which is a portion of the Mexican frontier extending 20 kilometers in width from Matamoros, on the Gulf coast, through the States of Tamaulipas, Coahuila, Chihuahua, Sonora, and Lower California, to the Pacific Ocean, all bordering on the United States. This Zone, as enacted by the Congress of Mexico, exempts the importation of foreign goods from custom duties, and makes this and other ports similarly situated within it free ports within the specified limits, and in it all real estate must be owned by natives or citizens unless by special concession from the national Government.

While the real estate conditions of the Zona Libre are intended solely for the protection of Mexican interests, leases are made by foreigners that are tantamount to purchases, and a few Americans are already acquiring real estate within the Zone by authority from the central Government, which is readily granted.

It will be seen from the accompanying statistics that Paso del Norte has grown in a few years from a frontier city of no commercial importance to be the leading city commercially in the entire Republic as a port of entry and distribution of foreign merchandise and as a point of exports to the United States. Indeed, it should be noted as a fact that it exports annually to the United States values only exceeded by three or four consulates, while it ranks among the first.

Its present status and rapidly growing importance will be seen by a comparison of the exports of the fiscal year just ended, and that preceding, as follows:

Fiscal year ending June 30—	
1886	$8,714,664 42
1885	2,077,005 79
Increase	6,637,658 63

The indications are that the exports this year will reach ten millions or more, which is indeed a showing so astonishing that few can fully appreciate the rapid advance.

MINING INTERESTS.

The State of Chihuahua, one of the largest in the Republic, is principally noted for its mines of silver, many of them rich in virgin ore and but partially developed. In late years, I dare say, more American capital has been invested in mining in this State than any other in the Republic. These mines rank among the first in the country, and many of them have been worked with profit under the crudest systems for years. American machinery is gradually being introduced, and the result is the annual output has been greatly increased. The future alone can reveal to what vast dimensions this one industry will extend. It is certainly but in its infancy now, and must rapidly grow, notwithstanding the many impediments in the way of successful pursuit.

CATTLE AND STOCK.

While immense tracts of land are devoted to the raising of cattle, there is a much larger portion of the State that is useless from the great scarcity of water. Pumps and wells are gradually being introduced, principally by Americans, and it is but a matter of time when great bodies of land that heretofore have been left idle will be utilized for grazing purposes.

The introduction of better blooded cattle for breeding purposes is quite extensive, and promises an improvement in their grade throughout the entire section.

The price of steers, yearlings, and cows ranges from $8 to $18, Mexican currency, equal in value to $6 and $13.50, American currency, and large numbers are exported to the United States from this port, both for breeding purposes, on ranches, and for slaughter. Sheep likewise are herded in large numbers, and constitute no small part of the commerce of the country. They range in value from $1 to $2, Mexican currency, equal generally in American currency to 75 cents and $1.50.

AGRICULTURE.

While Chihuahua and the adjoining States are not, strictly speaking, agricultural, owing to the great scarcity of water, yet where irrigation is practicable, as on the Rio Grande and other streams in the interior, splendid results are obtained from the cultivation of the soil. In the lower portion of the State of Chihuahua, thousands of acres are devoted to the cultivation of corn and cotton, both of which grow most satisfactorily; and this generally with the rudest and most superficial culture, the most ancient customs being pursued. The valley of the Rio Grande, rich in soil, and capable of producing most varied crops, is destined, without doubt, to become noted for its agricultural products; as a fruit-growing country it is remarkable. Even in its present crude and only partially cultivated condition, the finest apples, pears, peaches, plums, apricots, and quinces are produced in abundance and of as fine size and flavor as can be found anywhere, and especially when the new and improved varieties have been introduced. All varieties of vegetables grow admirably and are to be had nearly the year round.

THE MISSION GRAPE.

The Mission grape, now widely known as the "El Paso grape," is grown here to great perfection, after an acclimation of over two hundred years, and is unexcelled for richness of flavor. It is peculiarly adapted to this latitude, climate, and soil, where the grape is entirely free from blight and diseases of any kind, so destructive to the vineyards in Europe and California. Experienced cultivators of the vine note that all the conditions of the soil are united to produce the grape in the Rio Grande Valley in this vicinity to perfection, whilst the climate, equable, mild, and dry at the grape-flowering season, and when the fruit is maturing, prevents blight and rot. As a table grape it may safely be said it has no superior, and can be produced at no other point to the perfection it has attained here. It has been tried in California and other wine-producing countries with only partial success. It is estimated that one acre with one thousand vines is worth $1,000, and the industry is largely on the increase and will in time rival any of the grape-growing countries in quantities produced. Some ten thousand caskets are annually shipped to the eastern market for table use alone, whilst much wine of superior quality is produced from these grapes. With 1,200 miles closer connection with the Eastern States of our country than California possesses, the advantages in transportation alone are so apparent that in the near future it will rival that great fruit-producing section.

POPULATION.

The population of the ancient city of Paso del Norte (more than three hundred years old) is now estimated at 7,000 souls. Years ago it is estimated that it reached some 20,000, but as trade was gradually diverted to other points in the Republic, when great facilities were then offered, it gradually dwindled down to the present numbers. The great State of Chihuahua has a population of some 250,000 inhabitants, and its capital, of the same name, is a thriving city of 18,000 inhabitants.

In this State there are about 2,500 foreigners, 2,000 of whom are citizens of the United States, resident here, engaged principally in mining, stock raising, and as employés of the Mexican Central Railroad. The remaining foreign population are composed of German, English, and French, who are generally engaged in mercantile pursuit.

The natives are generally descendants of peons, and, while they are not remarkable for intellectual culture, they are a hardy race, of lazy, idle habits, without principle. They are satisfied with little, and the masses live in the most primitive style, and in many instances in squalid poverty. In the interior of the country their condition is worse, where as peons they are held in abject surveillance, and with never-ending debt impending over them, from which there is no escape, they labor for their masters, the owners of herds and haciendas. The wages for such labor in the interior will average 2 rials, equal to 25 cents, per day. The settlement of Americans in the country does not appear to make any marked change in these people. They adhere with great tenacity to their ancient customs and habits, both in a business and social way that are obsolete and belonging to an era long since passed.

But so much has been written and is well known in a general way about these people, without any well authenticated history, that I desist for some future communication.

SANITARY CONDITION.

Of the health of this consular district, it may be said that nature has done all that could be asked. At an altitude of 3,700 feet above the sea level, the pure air is a boon to those suffering with pulmonary effections. Too much cannot be said of this truly delightful climate with the mercury rarely below 20 degrees above zero, and then only for a short time, and with snows which never entirely whiten the ground, and with no damp, chilly days, and no sultry nights in midsummer, it is one of the most equable climates to be found on the continent, and the atmosphere is unsurpassed for dryness and purity, full of electricity; it is wonderfully exhilarating and never malarial. It is the very place for consumptives and those affected with throat and lung troubles, and is fast gaining such notoriety for these and other kindred diseases as will at no distant day make it noted as a sanitarium and health resort. The best accommodations can be had at El Paso, Tex., just across the river, for all who may come as invalids or for comfort and pleasure.

EXPORTS AND IMPORTS.

It is impossible to obtain reliable data as to foreign importations, or a detailed statement of the goods, wares, manufactures, &c., introduced at this port, but the board of trade of El Paso, Tex., has, however, had access to information not obtainable at this office, and has compiled a statement which seems to be reliable.

It will be observed, however, that this table shows only goods cleared at the Mexican custom-house at this place and shipped to the interior by the Mexican Central Railroad, without mention of goods introduced for local consumption by city merchants and others. It will also be seen that the table only gives the number of cars arriving, with an estimated value of the goods introduced, which will likely fall under the correct figures.

There are many difficulties and delays in the introduction of foreign goods at this point, owing to the awkward way in which business is conducted at the Mexican custom-house here. This grows out of the system in vogue under the laws now in force and not from any fault of the present officials or any disposition on their part to impede the commerce of the two countries.

The feature of fines and penalties for slight omissions and inaccuracies in consular papers ought, by all means, to be abolished. They will occur in the hurry and press of business, and the commercial world should not be made to suffer thereby.

J. HARVEY BRIGHAM,
Consul.

UNITED STATES CONSULATE,
Paso del Norte.

Merchandise cleared at the custom-house in Paso del Norte, Mexico, and forwarded by the Mexican Central Railroad Company, excepting coal and railroad material, from the 1st of July, 1885, until the 30th of June, 1886.

Imported by the Mexican Central Railroad	cars..	2,088
Imported by teams, estimated about 10,000 pounds daily, being per year	do...	150
Total	do...	2,238
Or ten trains to a car		23,380

Of which were—

	Cars.
Cotton	273
Machinery and agricultural implements	617
Bluestone	35
Iron	29
Sulphur and soda	13
Wagons and wagon material	22
Powder	12
Beer	33
Wines and liquors	14
Lumber	129
Candles	15
Quicksilver	14
Sugar	25
Cotton seed	7
Salt	75
Oil	273
Live stock	47
Grain and feed	17
Sundries and mixed goods	585
	*2,238

Value of declared exports from the consular district of Paso del Norte, Mexico, to the United States during the quarter ending December 31, 1886.

Articles.	Value.	Articles.	Value.
Carriages	$2,095 00	Precipitate of silver	$32,865 71
Cigars and cigarettes	1,746 42	Saddles	544 00
Cattle	36,360 00	Silk shawls	450 00
Copper	5,000 00	Sheep	112 50
Earthenware	89 00	Silver bullion	345,963 26
Fruit (oranges, bananas, &c.)	3,536 00	Silver ore	803,504 00
Gold bullion	16,332 20	Wool	7,364 11
Gold coin	45,175 00	Wines	232 00
Gold and silver bullion	356,232 36	Wax and rag figures	347 57
Hides and pelts	5,218 68	Woolen hats	250 00
Horses and mules	2,749 00		
Jewelry	692 29	Total	3,340,257 02
Mexican beans	630 32	Total exports for three quarters ending September, 30, 1886	5,364,057 51
Mexican sugar	302 00		
Machinery	436 80		
Miscellaneous	4,805 00		
Mexican silver dollars	1,666,441 00	Total for year ending December 31, 1886	8,704,314 53
Printed books	883 00		

*Representing a value of $6,745,500, on which duties have been paid amounting to $1,539,201.93.

CENTRAL AMERICA.

HONDURAS.

Report of Consul Herring.

INTERNAL IMPROVEMENT.

The expenses and excitement of the insurrection and rumors of war have retarded the advance of internal improvement, so that nothing worthy of notice has been done in this regard, except that the Government has built a large and commodious penitentiary in this city and a wagon-road from the Pacific coast near Amapala to Tegucigalpa, and from Tegucigalpa to Yuscaran, a distance in all of 160 miles. This is the only road of the country leading into the interior, and has cost the Government $900 per mile, and is now, this soon after its completion, so ruined by the floods of the late rainy season as to be almost if not quite impassable with wheeled vehicles.

LIVE STOCK.

Raising stock may be a slower business and less alluring than mining, but it is sure and safe, and certain of steadily increasing profits. A former lengthy report confined to this subject, during last year, relieves The necessity for a very extensive notice under this important head. any ruling prices for the year have been: For cows, from $7 to $10; steers, average, $9; two years' old, $3 to $4; three years' old, $4 to $6; hogs, $3 to $6; goats, $1 to $2; cargo or pack animals (mules or horses), from $35 to $50; saddle mules, from $60 to $150; saddle horses, from $20 to $60; mares, from $6 to $10. Mares are not used except for breeding purposes. Sheep are rarely seen. Besides their greater liability to attack and destruction by dogs and wild animals, the Honduraneans have about the same prejudice against the sheep for meat as some of our people have against the goat, and as there is no factory or market for wool, the sheep cuts no figure in the live-stock industry. There is no improved stock in the country. The animals are all small. The mule is more valuable than the horse even for the saddle. He is more sure of foot for the mountain trails. He skips over and around the mountains and along the rims or ledges of precipices with the agility and safety of a goat, when often a stumble or misstep would throw him and rider hundreds of feet down steep declivities to certain death. He is seldom shod and as seldom needs it, his hoofs being remarkably tough by nature. His mane is always sheared, but his tail never. He is a tough little animal, of most wonderful endurance, and can live and thrive on an allowance of food that would starve our larger animals. He is capable of the longest journeys under the saddle, going 15 to 20 leagues or 45 to 60 miles a day. He is great and wonderful in his usefulness, for his country could not get along without him.

AGRICULTURE.

Agriculture is in a most unprosperous condition. Notwithstanding there are rich lands, especially in the valleys and along the rivers, and notwithstanding the laws are most favorable, there being no tax on land or its product, still the people seem to know as little of the science of agriculture as was known in the primitive ages before the flood.

You may travel from one end of the Republic to the other without seeing so much as a plow. You will find a wretched substitute in the shape of a straight one handled piece of timber, with a beam to fasten the team to and at the foot a strip of pointed iron, which turns the soil both ways, and which is about the size and shape of an ordinary hand.

For an ax they have a light, sharp edged iron implement, with a round hole through which the handle is fastened.

They have also a machete, which is a knife varying from 18 to 24 inches in length and about 2 inches in width, with the blade tapering to a point.

If you will imagine the crudest wagon your mind can conceive, with wheels of round bandless wooden blocks, having holes in the center for the axles, you will have the ordinary wagon of Honduras. In some towns, however, they have a few good carts, but they don't know how to use them. They are run without being greased, which is not only a cruelty to the animals drawing them, making their loads heavier, but they go through the streets with a deafening noise that drowns the voice and makes conversation impossible until they pass. It is a terrible rasping, screeching noise that would put some people's teeth on edge and render the more nervous almost frantic, and on any street in any city of the United States would be abated as a nuisance.

Our kind of ox-yoke and bows are not used here. In place of them is used a piece of timber crossing from the forehead of one ox to that of the other and fastened around the horns or forehead with a strip of raw-hide, so that the load is pulled by the head instead of from the shoulders or neck. Logs are hauled dragging on the ground.

Perhaps the first American wagon that was ever here and run in the proper trim and yoked to oxen as it should be was one belonging to an American mining company, and that passed this office some time ago. It was amusing to watch the natives as they would stand on the streets and corners and the storekeepers as they rushed from behind their counters to look at this wagon, as if it was a "real show" and a great curiosity.

The machete is the most prized and the most used of any implement. The native countryman always carries it with him wherever, whenever, and for whatever he goes. It is his weapon of defense against man and beast. It cuts his way through the dense jungles. It cuts the grass and chops up the green corn for his horse. With it he kills and cuts up his hogs and his beef, and with it he cuts his meat and his bread. It is his best and most indispensable farming implement. The so-called plow is only sometimes used, but the machete always. With it he clears the briers, the brush, and the long grass from his corn-patch, and with a sharp stick, or this same machete, he punches holes in the ground at irregular distances, drops in his corn, covers it with his heel, and retires to the shade for kind nature to do the rest, or rather for nature to do the work and himself to *rest*. The corn is not planted in cross-rows at regular distances, or in straight lines, so it can be afterwards worked, because it is not intended to work it.

With this kind of farming only nubbins are generally produced, but the natural conditions are so favorable that large corn is sometimes found.

Corn is the only farm product worth particular mention. It is raised almost, if not quite, to the exclusion of all other cereals, except rice and beans. Beans are very extensively raised, and make what may be called a national dish in Honduras. Beans or "frijoles" are found on everybody's table everywhere, and so are "tortillas," which are made

from dampened, pulverized grains of corn. There are a few coffee plantations, but they have proven unprofitable, perhaps for want of proper attention. Enough sugar is made for home consumption, but none for export. Fruits are grown extensively for exportation on the north coast, but not in this district. There is no bureau of agriculture, and there are no statistics to show the amount or value of farm products.

The price of Government land is from $20 to $100 per "caballeria," equal to 33⅓ acres.

WAGES AND COST OF LIVING.

There is no established rate of wages for labor, and, without attempting with present limited information to give a correct representation with comparative cost of living, suffice it to say that the rate of wages is far below the cost of comfortable living. Yet there is no conflict here between capital and labor; no great labor problem to agitate the minds of the people, frighten capitalists, and disturb the dreams of the statesmen. The "irrepressible conflict" is only read of at a distance. Agrarianism and socialism or communism are little thought of, and much less feared. It is not a congenial home for "labor strikes." In fact, "strikers" are not tolerated. A strike was attempted once, under a preceding administration, by the printers in a Government printing house, not for higher wages either, but for contract wages, withheld on account of a depleted treasury. The poor printers were hunted and arrested by soldiers or policemen, under orders from the government authorities, given a sound flogging, and sent back to their work. Rather a summary way to solve the "great problem," yet it worked like a charm in this Republic.

NEWSPAPERS.

There are three newspapers published in this city, as follows: *La Nacion* (semiweekly), *La Republica* (weekly), *La Gaceta* (weekly). These are the only newspapers or periodicals of any kind published in this Republic, except, perhaps, one other small newspaper, said to have recently commenced at Truxillo. Every one of them is of very diminutive size, *i. e.*, cannot contain much reading matter, and this is a reason for the Government proceedings being so slowly published.

OPENINGS FOR NEW ENTERPRISES.

There are no railroads, grist-mills, cotton-gins, water-works, gas-works electric lights, photograph galleries, factories, banks, or banking-houses and—no American merchants.

COMMERCIAL RELATIONS.

Meal is not used, but corn is converted into "tortillas" as before stated. Flour is shipped from the United States. Nearly all other merchandise comes from England, France, and Germany, because, briefly, from these countries the freights are cheaper, the goods are manufactured more especially to suit this market, the packing is better for shipment and for mule-back transportation in rainy seasons and across swollen rivers, and these countries allow the merchants here longer credits and on better terms than our countrymen do. These are the hindrances to the development of trade with the United States. If our enterprising merchants and manufacturers, the facts being stated, think it worth their while to remove these hindrances, they know as well how to do so as the consul can tell them. It is useless, at the risk of it being stale, to repeat the advice so often given under this head from

other consulates in Central America, though it would apply equally as truthful here.

MINES AND MINING.

Notwithstanding the insurrection and rumors of war, the exciting hunt for gold and silver has continued with a lively interest, and mines and mining are more talked about than any other branch of industry.

Nearly all the mines organized or reorganized, under the improved system of mining, are only in a preparatory stage, and therefore not much bullion has been produced and no dividends declared. The amount and value of bullion produced are not known. The Government derives no revenue from this source and no record is kept.

It is a notable fact that all the mines of Honduras that have attracted considerable public attention have been or are being taken charge of and controlled by Americans or American capital. The only exception showing investment of foreign capital is a mine belonging to a French company near San Pedro, and which is managed by the only French consul accredited to this Government.

Nearly all the mining capital of Honduras being held by citizens of the United States, it would be interesting to know the exact amount, but it has not been ascertained. It rises, however, away up in the millions, and has grown rapidly within the last two years, and still continues to grow.

Following is a list or mention of the principal mines of this consular district, which have been organized or were commenced to be organized during last year:

Hondo Company of Chicago.—Has placer mines in the department of Olancho; no bullion yet produced, but $10,000 has been wasted in opening up tunnels and constructing flumes, which have been washed away by high water.

Hondo and San Miguel.—Placers in Olancho. Belong to James Rector, an American. No company yet organized, but $4,000 has been spent in preparations.

Cambell Reduction Company.—Incorporated under laws of New York. Quartziferous mine of free-milling gold ore, in Olancho; $40,000 has been spent on its account, but not exceeding $500 in actual work on the mine. The mismanagement was so gross that the capitalists refused to advance more money, and the property reverted to its prior owner, Colonel Aguillera, who has just cabled from New York that he has organized a new company.

Burke's Concession.—The largest concession of placer mines ever made in Honduras was that made to Maj. E. A. Burke, of New Orleans, in September last. This concession includes many miles of the Guaype River, with a distance of 500 varas width on each side of the river. A vara is a measure of between 32 and 33 inches long. The number of miles is not specifically stated, but the calls and boundaries indicate as many, perhaps, as 50. There was also conceded to the same party nearly as many miles of the river Jalan, with a distance of 600 varas width on each side of the river. This concession is further noticeable in that, that this Government gets a larger direct consideration for it than it has yet obtained from any mining enterprise ever started in Honduras. And, moreover, after the enterprise has declared a dividend of 10 per cent., it is to pay to this Government 2½ per cent. of the annual net proceeds, and after ten years from said time as much as 5 per cent. of the net product from the river Jalan. This feature is a depa: ture from the custom, as in no other mine is the Government to participate in the profits. Within the limits of the granted territory, which is all in Olancho, there is undoubtedly an abundance of gold, and Major Burke is resolved to organize a company for mining operations on a large scale.

Minas de Oro.—The placer mines of Paine, Atchison, and Smart, and those of Wermuth (all Americans), near the town of Minas de Oro, have proven to be valuable. A hydraulic machine is now at work on Mr. Smart's placers.

San Marcus.—At Savannah Grande, is owned by Virginia gentlemen, and is about 50 miles from the Pacific coast, at an elevation of 3,500 feet above the level of the sea. Machinery for working not yet arrived. Mine contains silver ore (sulphurets free from base metals). The veins are vertical, and average 2 and 3 feet in width. A 2-foot vein, honored with the name "Virginia," is rich in gold, while others carry only a small per cent. Walls are porphyry. In the same mineral district are many other mines not worked at present, but known to be valuable, among which, belonging to Americans, are the "San Bartola" and "El Plomo."

Santa Lucia Mining and Milling Company and the Rio Chiquito Mining Company.—Both incorporated under the laws of New York, and are located at the healthy town of Santa Lucia, 9 miles east from Tegucigalpa, and 4,000 feet above sea-level. The ore is silver, but carries some gold. The veins are true fissures, with quartz gangue and well-defined walls, and average about 3 feet in width, with varying courses and angles of dip, the dip usually being over 45 degrees. A new steam saw-mill has been recently erected, but active work in the mines is suspended for the present on account of some trouble, the nature, cause, and extent of which are not sufficiently known for explanation in this notice.

Los Angeles Mining and Smelting Company of New York.—Owns the Animas silver mine, which is about 5,000 feet above sea-level, 27 miles east from Tegucigalpa, at the town of Los Angeles. The vein is a true fissure, blanket-vein, with an inclination of 10 to 12 degrees to the horizon. Its thickness is from 1 to 4 yards. The ore is galena ore with some pyrites, and has to undergo calcination before smelting. Its average yield is about 70 ounces per ton. The workings of the natives are still open and accessible, and the ore may be seen for a distance of about 2,000 feet of drifts. This company is making preparations to put up a smelting plant with a capacity of 25 to 30 tons per day.

New York and Honduras Rosaria Mining Company.—Incorporated under the laws of New York, and works its mine at San Juancito, 30 miles from Tegucigalpa. Although it is not of one year's growth, yet during last year it added very expensive and very extensive improvements; and this mine is further deserving of special notice on account of its being, at present, the best-established and most extensively operated mine in Honduras. It should be a source of pride to any American, as he beholds the busy and thriving little town of San Juancito, with its 3,000 inhabitants, gaining their livelihood, mediately or immediately, by means of this American enterprise situated in their midst; and it forecasts what Honduras may be when her rich minerals are properly developed and put under prosperous headway.

The veins of the mine are true fissures, running east and west and dipping to the north. Walls solid; mine dry and well ventilated; tunnels and winzes deep. Output, 2,000 tons of ore per month. Ore of brittle quality, very much decomposed, carrying considerable gold and native silver. Preparing to introduce steam drills. At present twenty-stamp mill and eight pans, and preparing to increase to forty stamps and fourteen pans within six months. Employs sixty foreigners (mostly Americans) and four hundred natives. The ore is transported by inclined gravity road from upper works of the mine to the lower levels, and thence to the mill by wire-rope tramway, a distance of 1¼ miles. The mill is run by a 6-foot hurdy-gurdy Pelton wheel of 450 horse-power capacity. Water is carried to said wheel through a wooden-box flume 3,500 feet long, and thence by a 300-foot fall through a 24-inch iron tube 728 feet long. Native labor ranges from 75 cents to $1.25 per day. Foreigners, on contract-work in mine, earn from $4 to $10 per day, Honduras money. Present production, 3,000 pounds gold and silver bullion monthly, which is shipped to and sold in New York. Funds for working are obtained by means of drafts on company in New York, which drafts command a higher rate here than those of any other company.

There are other rich mines of well-known value in Honduras, and especially at Yuscaran, and nearer there than here; but being outside of this consular district, an enumeration of them does not properly belong to this report.

There is, however, one other mine in this district which must be mentioned on account of the wisdom of its owners. It is the Zelaya mine, about 5 miles from San Juancito, and belongs to the Zelaya Mining Company, incorporated under the laws of New York. It appears that this company has put up $50,000, with which (if this much is needed) to thoroughly develop and practically prove the value of this mine, before incurring any greater liability for expensive machinery, &c. The wisdom of this course is deserving of the highest commendation. There is no doubt that many, if not most, of the mining failures are attributable to overconfidence in the quantity or quality of the ore to be worked, and of consequent extravagant investments in the purchase, transportation and erection of heavy and expensive machinery or plants, before the value of the mines, and what is required to work them economically and successfully, is sufficiently proven. With the wisdom and forethought of the Zelaya Company, and with the proper men to manage the preliminary work, mining *then* looks like business.

Capitalists in the States who desire to work these mines by agents

sent out here cannot be too careful or particular about the kind of men they send. They should remember that a man's standard of morality, faithfulness, or business rectitude may not be so creditable here as when at home, surrounded by the restraints of his family and friends, higher associations, &c.; and that in the absence of these wholesome restraints, and in new countries where the laws are less rigid, and where immoralities are invariably more common and less detested, men are more apt to prove faithless, worthless, or yield to low temptations, the mere thought of which would, perhaps, shock their finer sensibilities at home. Hence, not the cheapest, but the very best men should be selected, or rather, say, sought after, for these important positions; men who are thoroughly honest, sober, industrious, and wide-awake, and who are of tried ability and well-known experience in the business. And even then there will be plenty of need for allowances, on account of a want of knowledge of the character of the country, of the character of its labor, the habits and customs of the people, and last, but not least, a want of a speaking knowledge of the language of the people, this language being Spanish, not spoken exactly as in Spain, but yet as different from ours.

During last year there was an unwarranted excitement in some portions of the United States about the gold fields of Olancho, caused by flattering descriptions in newspapers, private letters, and oral statements of interested parties. This has brought a number of men here, without capital, who, both for themselves and for the country, had better have remained away. They lose their little all in a vain search, and are plunged from the high hopes with which they came into the depths of despair, and leave the country, naturally scattering against it most gloomy and unjust reports, thus committing the double damage of ruining themselves and disparaging the country. Therefore it cannot be too emphatically nor too often said that this is not "a poor man's mining country." The gold is here, but it cannot be picked up or panned out on the wayside. It requires hard work, patience, privations, and money to obtain it. True, this country is prolific in its spontaneous productions of the necessities of life, but only the absolute necessities, and the traditional "'lasses pond with its bordering fritter trees" is not to be found in Honduras.

The gold deposits average about 30 feet in depth, with the richest portions nearest the bed-rock. This requires heavy machinery, which is very expensive to get into this roadless country. No man or set of men should come here to grow rich in mining who cannot control a capital of at least $20,000. To those who can, the government stands ready to extend a warm welcome, and all concessions, courtesies, and protection necessary. The mining laws in themselves are as liberal as could be reasonably desired, extending as many advantages to foreigners as to natives, exempting from duties the exports of bullion and the imports of all mining supplies, conceding to each mining claim a distance of 250 varas in length to from 100 to 200 varas in width, according to dip of vein, with all necessary wood and water rights without tax or government charge for anything, and allowing exclusive right to each mine "denounced" for an indefinite time, on condition that four men are kept employed in working it, which condition is to insure good faith in "denouncements." while it gives ample time to organize the necessary capital.

D. W. HERRING,
Consul.

UNITED STATES CONSULATE,
Tegucigalpa, January 24, 1887.

SALVADOR.

Report of Consul Du Pré.

Salvador is supplied with much the greater share of foreign goods sold here by England, Germany, France, and Italy. Cheapness, without reference to real value, effects sales among the natives, untraveled, untaught, and very poor. In payment for these goods and wares the crops of the country, coffee, sugar, rice, tobacco, gum, tolu, cocoa (chocolate), and other tropical products are shipped to Europe. These pay no duty at English ports, and thus England, as a competitor of the United States, proffers a premium of about 30 or 40 per cent. for the trade of Salvador.

It results from these and other facts hereinafter recited that European states are rapidly gaining in this Republic supreme commercial power. If enormous public debts were discharged and grievous burdens of taxation lessened, the common people, widely separated from the governing class by race features as well as by broader and deeper lines of demarcation drawn between poverty and riches, toiling as they do most industriously, would be speedily blest with abundance. The native whites, of pure Spanish blood, constituting perhaps 8 per cent. of the whole population, are the exclusive office-holding and law-making class. These, too, are the land proprietors, and land and houses and lots are untaxed, while the natives, as the masses of these Indians and Aztecs and Meztizos are denominated, must pay a duty, including mole and wharfage rates, of 120 per cent., besides freight charges, on their cotton shirts and machetes. If trade with San Francisco, even burdened with these obstructions, were conducted under terms of a liberal reciprocity treaty, there would be discovered here an invaluable market, especially for cotton goods, hardware, and agricultural implements and machinery. Steel plows are slowly substituted, by progressive native intelligence, for single-handle wooden beams drawn by oxen and described in the pages of Virgil, even as the goad, in universal use in Salvador, is alleged to have been an original and wicked device of Esau. Moreover, in thatch-covered adobe huts evereywhere in Salvador I find cheap sewing machines, and these tawny, black-haired perfectly shaped native women use them most deftly. Native mechanical skill is even wonderful, developing itself wholly in imitativeness. They invent nothing. My English friend broke his gun stock; it was costly, beautifully carved and inlaid with silver. A native mechanic insisted that he could make another. Discrediting his assertions we gave him the fowling piece, as worthless as that of Rip Van Winkle described in the legend of Sleepy Hollow. After ten days the native returned, and as we believed, with the same stock, its broken parts skillfully glued together. We were not convinced of error till the adroit mechanican brought the broken gun-stock, from which he had transferred to the new not only the delicate carving of the original, but its exact shape and every metallic decoration.

However great the advantage given to the Salvadorean debtor by English commercial codes, enabling him to pay in untaxed products of Salvador, American is worth 3 per cent. more than English gold and rates of exchange favor San Francisco and New York. Therefore the diversion of a larger share of the present than of any former coffee crop to American markets. A German manufacturer tells that the

American tariff makes American products of American cotton mills so costly, despite the low cost of food and land in the United States, that we cannot compete with Germany in a market demanding the lowest grades of the cheapest goods. The infinite superiority of American domestics, and especially of goods woven of cotton never compressed for foreign or interstate shipment, was confessed; but the masses of the people of Salvador are very poor and heavily taxed. They wear cotton garments, men and women, buying the fewest possible number of yards at the lowest possible price. Therefore do I find here bales of domestics bearing the brands of the best American mills, and yet the local tradesman tells me that these worthless goods are products of European mills drawing their supplies of raw cotton mainly from India and Egypt.

As the natives have learned the difference in value between the foreign iron and American steel machetes having the same shape and brand, and are learning to distinguish the perfect American sewing-machine from the cheap and rudely-made German imitation, even so will they discover the superior durability of American cotton goods. Therefore do I find in each merchant's ware-rooms a few bales of American domestics sold at 30 per cent. higher prices than European goods of the same nominal grade.

Through the active intervention of agents of the Pacific Mail Steamship Company a very large share of the coffee crop of Salvador and Costa Rica now finds its market in San Francisco.

The Central American coffee crop, of which, perhaps, half has been shipped, England and Germany supplying the sacks, it is estimated, will be as follows:

[1 quintal = 100 pounds.]

Country.	Quantity.	Increase over last year.
	Quintals.	*Per cent.*
Salvador	225,000	20
Costa Rica	250,000	25
Nicaragua	70,000	20
Guatemala	480,000	10

Through the press of San Francisco, I sought some months ago to induce mercantile bodies of that city to proffer liberal premiums for the best agricultural products of Central America, and especially for the best coffee, sugar, tobacco, indigo, cocoa (chocolate), and other peculiar products of Salvador and Costa Rica, these two republics trading most generously with the commercial metropolis of the Pacific coast. Special prizes were to be awarded for tobacco and cigars, for the production of which the districts of Copan in Honduras and Coputepaque in Salvador are especially noted. I was not aware that this wise action had been taken by San Francisco till the fact was published in several newspapers of these Central American States. This press has much to say in commendation of the conduct of California merchants, promising to San Francisco a monopoly of trade with these Republics.

I have adverted to the capacity for imitating and copying in mechanical art betrayed by these natives. They may have acquired this tact from Europeans. Sewing machines and machetes, the long heavy knives used in clearing and cultivating fields and in pruning coffee trees, one

borne about everywhere by each man and boy in Central America (the whites carry the stilettos and repeaters), and the cotton goods sold here, all, alike, often bear false brands and are counterfeits.

Peruvian and Chilian pesos (dollars) are the currency of the country, and the natives, as instructed by foreign counterfeiters of foreign commodities, become adepts in making and uttering counterfeit money. Dealing with a native you must pay in silver, and to each coin is at once applied a crucial test of value. It must ring clearly as cathedral bells.

Though the International Bank of Salvador be potent and rich, its notes circulate only in this and adjacent cities. The natives accept nothing but silver. Gold, unknown as money, commands a premium of 30 to 35 per cent. for shipment.

I am led to believe that the United States can have no absolute monopoly of Central American trade until our own revenue codes have been materially modified. The purpose of concentrating the trade of these republics in ports of the United States can hardly be attained, or have its proper value, until this grievous public debt of Salvador, left a legacy to President Menendez by the late President Zaldivar, be paid by custom-houses exacting 125 per cent. upon imports. Meanwhile the people must buy the least possible, smugglers do their worst, and legitimate trades-people hardly subsist.

A blacker shadow than this overhangs the skies of Salvador. Zaldivar, to whose wasteful government President Menendez ascribes all the griefs of the Republic, who is said to have corrupted the governing and degraded the industrial class, many of the former praying, it is stated, for his restoration to power—Zaldivar remains the *bête noire* of Salvador. He constantly threatens the invasion of the country, compelling the maintenance of a costly standing army, for which President Menendez, relying upon the devotion of the natives, proposes the substitution of a well organized militia.

The abstraction of these two thousand soldiers from industrial pursuits and vicious habits of idleness acquired and absolute expenditures in their behalf make them cost the impoverished country quite one million dollars annually.

The trade of the Pacific States of Central America must be confined mainly, until a railway may be built across these republics, to San Francisco. Recently C. P. Huntington bought the railway from San José, a village without a harbor, on the Pacific coast of Guatemala, 75 miles in length, to Guatemala city. Owning, as he does, with others, railway lines extending from Oregon and California to Newport News on the Chesapeake, he must purchase this Central American highway that he may own, as well, a short interoceanic route. It is hardly more than 180 miles from Guatemala city to the Bay of Honduras, hard by New Orleans and Mobile. But there is no harbor at San José, and to create one would cost more than that at Cherbourg, France—an almost incalculable sum. On the contrary, though the country be rough, as rent by earthquakes through past ages, the construction of a railway from a perfectly land-locked harbor on the Bay of Honduras to another, La Union, in Salvador, on the Pacific, is the most desirable of all possible commercial and political consummations that could be achieved by American wealth and energy in Central America.

L. J. DUPRÉ,
Consul.

UNITED STATES CONSULATE,
San Salvador, March 17, 1887.

HAYTI.

PORT-AU-PRINCE.

Report of Consul-General Thompson.

COMMERCIAL PROSPECTS.

Since the revolution in 1883, when certain cities of Hayti were in a state of siege, and fearful forebodings indulged in by capitalists, there has been a steady declination of trade, notwithstanding eventually the Government forces succeeded in causing the insurgents to capitulate. The leader of the revolution dying, his party was totally demoralized. This result should have caused an improvement in commercial affairs, as the administration of President Salomon showed that the Government was capable of overthrowing such insurrectionary tendency, and that, too, of a party guided by an intelligent chief; but entire confidence in commercial circles has not been fully established. The merchants, becoming fearful of risking their money, ceased relying on Governmental securities, or nominally remained contented in doing business on a smaller scale.

For the present fiscal year a possibility exists of an augmentation in business. There is every reason to expect a fair coffee crop, which is the staple export of the country. Nearly all of this article is shipped to Europe; hence the exporters have their credit in Europe, and if there is an abundance of coffee exchange will fall and good times be enjoyed.

On June 30, 1886, General Salomon was re-elected for seven years more to the Presidency, having a majority so favorable in the senate and house that he was elected unanimously; and it is believed he has succeeded, on the one hand, by the defeat and death of Boyer Bazelais and voluntary exiling of others of the leaders, and, on the other, by appointing to such positions that they are harmless many of the agitators of those heterogeneous parties that have been a curse to this Republic since its independence; parties who, by their constant interference in political affairs, have continually caused governmental derangement, and turned the ideas of those who might have been bent on honest pursuits to live "by the sweat of their brow" to the fascinating adventures inspired by cupidity and ambition, fostering intrigue that resulted in rebellion, so it had become a habit, as it were, so deeply rooted that a reported movement against the authorities at any one place was looked upon with a sublimity well advanced on the philosophic, and by many of the non-politic element with the reasoning of the optimist. Now it is believed by many that these numerous outbreaks are fast coming to an end, and as the countries of South America are producing stupendous quantities of coffee, unless peace and its concomitant join with labor for the tillage of this soil—Hayti depending upon her spontaneous growth of coffee, almost void of cultivation—Haytians, neglecting the wonderful resources that thus could flow with tenfold force into the national treasury, must see their country degenerate regardless of its natural fertility.

In conjunction with the above outlook I have heard many conversations where foreign annexation or a protectorate was argued as the

only way of rescuing the country. I have heard Germans say that if it was not from fear of the climate by their people they would make a move in this direction. But withal it is pointed out that owing to the position taken by the United States in the treatment of this Republic, they dare not, regardless of the "Monroe doctrine," even interfere when the Stars and Stripes, with their love of freedom, liberty, and national autonomy, continue to recognize Hayti as heretofore.

AGRICULTURE.

The prolificacy of this soil is astonishing. With attention any fruit or vegetable could be raised; certainly much care must be used, for as the seeds planted will flourish so will the weeds that would interfere greatly with their growth. In consequence a true system of agricultural science would be absolutely necessary in cultivating and developing the soil. Agriculture is in a very rudimentary stage; still, the natives persist in working on the same principle of the times of the old French colony; the hoe, cutlass, and indigo knife are the sole agricultural instruments used; and could some enterprising house send out an agent to study the want, or parties knowing the wants of the South American trade would give attention to this field, a lucrative business might be opened in agricultural implements, especially such as are adaptable to mountainous regions.

As aliens cannot own real estate in Hayti, there is not much inducement for foreigners, capitalists, to engage in agricultural enterprises, and thus far vast quantities of rich farming land remain idle. During the past year the Government have had a few farming implements of various kinds imported into the country through the American house E. Steinbrügge & Co., which were distributed to those whom it was presumed would value and use them; but if such were at all complicated great results cannot be expected, or that they will be very serviceable to people unpracticed in their operation.

Likewise it is said the Government sent for and received better plants in order to improve the cultivation of bananas, taking into consideration the amount of that fruit consumed in the United States and the great revenue derived therefrom by some of the neighboring islands. The move was a good one, but apparently unappreciated. There is no doubt that the need of this country for its certain progress is foreign industry, its muscle, and indefatigable enterprise.

In order to show more particularly the necessity of cultivating their chief export, coffee, and endeavoring to assist it by other exports so as to make up by production for the low prices paid here lately, it is only necessary to quote the prices since July, 1885, per cwt., not losing sight of the price five years ago, which ranged between $14 and $16 per cwt.:

Months.	Price.	Months.	Price.
1885.	*Per cwt.*	1886.	*Per cwt.*
July	$6 70 to $8 00	January	$5 90 to $6 10
August	6 60 to 7 10	February	5 90 to 6 50
September	6 50 to 6 75*	March	6 00 to 7 80
October	5 00 to 5 80	April	6 30 to 7 25
November	5 90 to 6 20	May	6 00 to 6 10
December	5 90 to 6 20	June	6 10 to 6 25

* End of September, $5.50 to $6.

CLIMATIC CHANGES.

The country has been suffering from severe drought for the past seven or eight years. This year, however, has been an exception, even during the so-called dry season there has been rain in abundance. Commencing in December last, 1885, it continued almost incessantly. Small crops of coffee have resulted from the drought, but this year the crop, which averages annually 60,000 to 70,000 pounds, produced about 45,000, as the heavy rains beat off the blossoms and buds, thereby decreasing the berries.

HEALTH AND POPULATION.

For the past year very good health throughout the island has been the general case; in fact, it is doubtful if any of the islands of the Antilles can show so clean a report, being free from epidemics of all kinds, and no appearance of malignant diseases so common during the hot months in the tropics.

By the last census, taken some ten years back, for Hayti entire, there were supposed to be 1,000,000 natives; for Port-au-Prince 30,000 was estimated. Regardless of the number of victims in political domestic disturbances, it is considered that since the past decade there has been an increase in the population. At this city, the capital, and its suburbs, which, I judge, may be looked upon as a criterion for the other cities, the number of births from July 1, 1885, to June 30, 1886, inclusive, have been 1,987. The deaths for the same period in the city amount to 853.

The population of the Republic arranged according to our consular districts would be about as follows:

Consular districts.	Population.	Consular districts.	Population.
Port-au-Prince (city)	40,000	Aux Cayes	30,000
Cape Haytien	15,000	Jacmel	55,000
Port de Paix	10,000	Jéremié	35,000
Gonaïves	21,000	Miragoâne	18,000
St. Marc	20,000	Petit Goâve	25,000

CONSTRUCTION OF A RAILWAY.

A law sanctioning the contract for the building of a railway from the city of Gonaïves to Gros Morne, a distance of about 24 miles, with the eventual termination at Port de Paix, was published in the Moniteur of the date August 19, 1886. This contract has been made with a French firm, who some years back sent engineers exploring into that part of the country, and who evidently found the condition particularly rich and profitable for the scheme, because ever since they have been striving to get the concession, and the only subvention given by the Government consists in the wood found in a parallel of 10 kilometers to the right, and 10 to the left, of the line on the public ground of the state. It is said that the above-named country abounds in forests of the finest quality of mahogany and logwood, and these valuable products, owing to there being no mode of transporting the same to the sea-ports, could not be utilized for exportation. The line is to be entirely finished at the expiration of twenty-eight months; also the rails are to be laid to the wharves, in order to communicate directly with vessels loading.

Such an enterprise embodies results of more or less significance. If successful, it will be the means of causing similar lines to be laid at available points and thus opening up anew the exportation of articles now difficult to obtain. Brazil wood and other valuable woods which have a marked value are now unavailable for want of roads and means of transportation to the seaboard cities.

APPROPRIATIONS FOR 1886–1887.

The budget for the incoming year, 1886–1887, aggregates $4,143,523.28, distributed to the different departments as follows:

Secretary of state of foreign relations	$96,576 74
Secretary of state of finance, &c	545,302 49
Secretary of state of war and navy	1,126,412 62
Secretary of state of interior and police	976,693 28
Secretary of state of agriculture	260,296 00
Secretary of state of public instruction	750,207 50
Secretary of state of justice	315,986 00
Secretary of state of worship	72,048 75
Total	4,143,523 28

Presuming that the export and import duties will aggregate the same as this year, $5,231,285.08, will leave a balance in the national treasury of $1,087,761.80, to pay off the different amounts of interest on the bonds of the Caisse d'Amortissements and the public debt.

NEW COINS.

On May 19, 1886, a law was passed by the national assembly that there was to be ordered for immediate circulation new silver and bronze coins to the value of $200,000, divided in this manner:

Silver coins of ten centimes	$150,000
Bronze coins of one and two centimes	50,000
	200,000

FINANCIAL CONDITION.

In September, 1880, the national assembly voted a law authorizing the Government by virtue of a contract made with the national bank of Hayti to have coined and put in circulation $2,000,000 in pieces of gold, silver, and bronze. At a later date the gold pieces were substituted by those of silver, divided as follows:

Silver:	
One-dollar pieces to the value of	$460,000
Pieces of 50, 20, and 10 centimes	1,490,000
	1,950,000
Bronze pieces of 1 and 2 centimes	50,000
Total	2,000,000

Before the passage of the above law there had commenced a very rapid importation of Mexican silver and exportation of American silver, which continued until the establishment of the national bank of Hayti, which imported the amount of national currency above named. Immediately a duty of 10 per cent. was levied on all Mexican money imported, which then, like American silver, began to be exported. *

* This law was repealed a few months after its promulgation.

In 1884 the Government issued $1,000,000 of paper money, the redemption of which was guaranteed by a surtax of 33⅓ per cent. on the fixed importations, and there commenced again the importation of American and Mexican silver. All of this paper money was redeemed.

During the year 1885 the Government issued $2,000,000 paper money, redeemable by 30 per cent. of the export duties on coffee; $600,000 in the past year (July 1, 1885–June 30, 1886) has been redeemed and burned in public on the "Place de la Paix." There were huzzas from the mass of bystanders and the interested multitude, for it is an acknowledged fact by all, the poor as well as the rich, that the day has not yet arrived, and is far distant, when Hayti can without risk put in circulation money of no intrinsic value. Indeed, a quantity of the coins have been exported and sold for the silver contained in them.

PUBLIC DEBT.

Considering the numerous political disorders that have so great a tendency to impoverish a country by its coincident internal indebtedness, from destruction of public property and payment of just indemnities to foreigners peacefully residing in the land, the public debt of Hayti is indeed remarkably small, amounting to $13,362,978.88. Below is a statement of such debt, which embraces four distinct heads:

(1) The bonds of the Caisse d'Amortissement (liquidation funds).

(2) The Domingue loan.

(3) Divers, such as paper money, ordonnances for salaries, unpaid interests.

(4) Foreign indemnities.

There exists in bonds of the Caisse d'Amortissement $425,592.72, bearing 18 per cent. interest; $2,012,705.20, about $200,000 at 18 per cent. interest, the remainder at 6 per cent.; $1,121,950.88 at 6 per cent; $1,186,722.08 at 6 per cent.; total, $4,746,971.01. Making about $360,000 yearly interest to be paid.

The Domingue loan, according to the new contract of July, 1885, reducing these obligations of 500 francs each to 300 francs, presents the following table:

	No.	Value.
		Francs.
Obligations at 300 francs	72,353	21,705,900
Shares at 60 francs	70,908	4,254,480
Total		25,960,380

These bonds represent unpaid interest due up to July, 1880.

This loan is extinguishable by yearly payments of interest and liquidating capital, amounting to 1,557,622.80 francs, and will last thirty-seven years—from July, 1885, to July, 1921. The 20 per cent. additional tax on export duties on coffee is applied to the payment of this sum, which is not charged to the budget.

The first year's interest and liquidation is paid; there has been paid likewise a share, accepted by the holders in exchange for those due but unpaid. The payment of annuities is divided as follows:

	Francs.
5 per cent. interest on the obligations	1,085,295
5 per cent. interest on the shares	212,724
	1,298,019

One per cent. of the liquidation on the total amount of the loan is already paid—259,603.80 francs—making a yearly total of 1,557,622.80 francs.

The table of interest and liquidation is so arranged that each year there has to be paid the same sum. The interest diminishes in consequence, but the liquidation of the capital augments in proportion.

According to the agreement the interest is payable half-yearly and the liquidation yearly. For this liquidation a drawing takes place at Paris.

According to the above each obligation, originally of 500 francs, reduced to 300 francs at 5 per cent., produces 7½ francs half-yearly.

Each share originally of 100 francs reduced to 60 francs at 5 per cent. per annum produces 1½ francs half-yearly.

As it will be perceived there is required to meet this yearly, according to the convention, a sum of 1,557,622 francs, or about $300,000.

Since the agreement the selling rates of these obligations have augmented in a very large proportion, and this arrangement scrupulously carried out by the Haytian Government has produced as a result that to-day the confidence is such that the large banking-houses place at the disposition of the Government the sums that it may need to disengage itself of its creditors.

Under the head of "divers" we find as follows: Paper money in circulation $2,000,000, including the $600,000 withdrawn but not reimbursed; ordonnances, unpaid interest about $450,000; total, $2,450,000.

The foreign indemnities are:

Two-third Gonaïves indemnities	$218,436 62
Four-sixths Port-au-Prince indemnities, about	480,000 00
Total of indemnities	698,436 62

RECAPITULATION.

Bonds of the liquidating fund	$4,746,971 01
Domingue loan	4,867,571 25
Paper money in circulation	2,000,000 00
Two-third Gonaïves indemnities	218,436 62
Four-sixths Port-au-Prince indemnities	480,000 00
Ordonnances, unpaid interest	450,000 00
Standing credit at the bank	300,000 00
Treasury bonds acceptable in payment of customs duties	300,000 00
Total	13,362,978 88

Therefore, as we have just seen, the debt of Hayti is at highest figures $13,362,978.88.

The revenues of the Republic are, according to the average drawn from the past five years, $6,000,000 per annum.

IMPORTS FROM THE UNITED STATES.

Provisions.— Lately, owing to the improved quality of American canned provisions, they have been much in demand in this market, the prices being lower than the European goods; the meats, fruits, and vegetables are highly appreciated.

The other principal imports are codfish, mackerel, alewives, pork, beef, lumber, ice, soaps, oils for painting, illuminating, &c., building materials, wheelbarrows, carriages, glassware, crockery, prints, denims, shirting, sheeting, nails, hardware, straw hats.

American shoes.—The shoe trade is gradually growing stronger, especially children's shoes, kip, and pebble goat. The finer grades of these goods for ladies and gentlemen are not yet able to compete with

the French manufactures. One great fault is the low instep of American shoes.

American cotton goods.—During the past two or three years the trade in American cotton goods, especially prints, has augmented considerably and beginning to take a firmer foothold in this market, monopolized in the years back by English goods. This has been brought about in a measure by the untiring efforts of the enterprising head of an American house doing business here, who has studied the market and had goods prepared especially for it. The increasing demand and preference shown bids well for this branch of our manufactures in the near future. It depends upon those interested to improve this outlet for a portion of the immense quantity manufactured in the United States and thus become an important item of our exports to Hayti.

EXPORTS TO THE UNITED STATES.

The exports from Hayti to the United States consist of logwood, coffee, cocoa, honey, goat-skins, hides, mahogany, beeswax, cotton-seed, orange peel, old metal, turtle shell, fustic, lignum-vitæ, rags, pickled limes, and sugar.

GROWTH OF SUGAR-CANE.

Sugar-cane grows luxuriously in the plains, but very little is manufactured into sugar; the sirup made is used generally in lieu of sugar, but the greater part is distilled into rum (tafia), valued at 30 to 40 cents per gallon, used for consumption among the natives. Sugar-cane pays on an average more than coffee at the low-prices which it has brought for the past few years, and many seem disposed to abandon the cultivation of coffee for sugar-cane. In Santo Domingo the chief export has been sugar, and it seems strange that the manufacture was not undertaken on a larger scale on this side of the island.

MODE OF TRAVEL.

Up to a few years ago travel was exclusively on horseback, but now a great many light vehicles are imported and extensively used; carriages are run on the cab system for public hire. Buggies are becoming very popular with business and professional men; in fact the higher class of people are beginning to keep private carriages. The major quantity of all conveyances are imported from the United States, but there is a preference for English harness. I have communicated to several American houses to send their catalogues, judging our harness as durable and cheaper than the English, and have succeeded in interesting several large dealers here who are trying to work up such trade, also that of saddlery. English saddles have always been the only article used. The roads are very bad and filled with stones, but dog-carts, phætons, even landaus are making their appearance, and there should be no question of these importations coming from anywhere but the United States.

A truth that seems to be lost sight of in preparing catalogues is that the language of this country is the French; and although Hayti, Guadaloupe, and Martinique are the only islands where French is spoken universally, still there is no doubt it would pay to cater somewhat to this trade.

JOHN E. W. THOMPSON,
Consul-General.

CONSULATE-GENERAL OF THE UNITED STATES,
Port-au-Prince, January 17, 1887.

SOUTH AMERICA.

ARGENTINE REPUBLIC.

BUENOS AYRES.

From Consul Baker.

FINANCIAL CONDITION.

My last annual report left the Argentine Republic "temporarily clouded by a laudable but ill-considered desire to 'do too much and go too fast.'" During the consular year just closed the country has been suffering from the effects of that policy. National borrowing and commercial overtrading have produced their legitimate results. The credit of the nation has been greatly taxed, if not strained, by the demands which have been made upon it, and commerce has had to struggle through a most unprofitable year. The suspension of specie payments has continued to unsettle values, and in the midst of the most violent fluctuations of the premium on gold, running up and down the scale from 10 to 65 per cent. and back again, business has had to be transacted without any fixed basis on which to make calculations for the future. The only wonder is that the merchants of the country engaged in the foreign trade have been able to withstand the pressure and maintain themselves so well. Only very few failures, however, have occurred during the year, and those were of no special importance. The business of the country is now trying to accustom itself to a depreciated currency, which may represent 80 cents to the dollar one week and only 50 cents the next.

CATTLE LOSSES BY FLOODS AND EPIDEMIC.

Besides the unsatisfactory monetary situation, the country during a portion of the year has suffered great losses in cattle and sheep from the excessive floods which inundated a large portion of the province of Buenos Ayres, and which, in some cases, drowned out whole estancias. To this succeeded a large mortality in the flocks and herds from some mysterious disease, hitherto unknown in the country, and which more than decimated what remained of the stock after the floods had subsided. The total losses from the floods were given at 500,000 mares and horned cattle, and 12,500,000 sheep, valued at $17,900,000, while the losses from the disease were put down at 7,000,000 sheep, equal to $8,000,000 more, making a total of nearly $26,000,000. As the annual increase is estimated at 20 per cent., making allowance for animals killed for food, it follows that there are to-day not so many sheep in the country as there were a year ago.

GENERAL TENDENCY TO SPECULATION.

These stumbling blocks, however, in the way of the progress of the Argentine Republic have had but little effect in repressing the ardor with which the country has been running "the race of empire," or less-

ening the speed at which it was progressing. Everything seems still to be going ahead on the "high-pressure" principle. The sheep farmers have really profited by the premium on gold in this, that while they sell their clip for gold they pay the expense of producing it in depreciated paper. The proprietors of "saladeros" have done the same with their jerked beef, tallow, and hides. Even the Government has virtually taken a hand in the speculation. Receiving gold on account of its late foreign loans, it has converted great portions of it into paper at the premium, thus making an average profit of 50 cents to the dollar in meeting its payments for the public works in which it has been engaged. The ease with which paper could be obtained from the banks has, during the year, given great opportunities for speculations, not only in gold, which have been excessive, but in all public stocks and in real estate. Throughout this portion of the country the prices of land have gone up to unprecedented figures, in many cases what was purchased for a few hundred dollars finding ready buyers again for as many thousands. Meanwhile, instead of "taking in sail" with a view to returning to specie payments, the imports of the country, already excessive, have continued to increase; and the exports, owing to the bad year, have continued to decrease, thus for year 1886 leaving a larger balance of trade against the country than ever before. In order to ease up the situation as much as possible, the terms of the law legalizing the suspension of specie payments by the banks for the period of two years, and which would have expired on the 1st of January next, have, by order of Congress, been extended indefinitely; that is, "until such time as, in the opinion of the President, it will be safe to require them to resume." The trouble with the banks is that they have made use of a large portion of their metallic reserves in pandering to the speculations in gold.

INTERNAL PEACE AND QUIET.

In the midst of this anomalous state of affairs, legitimate business was embarrassed by the recurrence of a general election of a new President of the Republic. The uncertainty which veiled the result, and the fears which were entertained that the public peace might be disturbed, had for a time the effect of making private capital seeking investment more cautious than it otherwise would have been in its movements. Indeed, there was much capital which left the country until the issue should be decided. To the credit of the Argentine Republic it is to be said that it passed the ordeal triumphantly the first time in its history as a nation, and the successor of President Roca was not only elected but installed without bloodshed or any attempt at revolution. President Celman, in his inaugural address congratulating the country on the peaceful auspices under which his administration begins, alludes to this circumstance. He says:

> The new period now inaugurated has a brilliant starting point, worthy of figuring in the list of our most glorious triumphs. For the first time in our stormy history, so full of sad experiences, the ceremony of investing the new president with the insignia of office, takes place amidst a perfect smiling peace; for the first time the struggling parties have not forgotten, even in the effervescence of political fighting, that for a free people under the form of constitutional government only the debate and the ballot can solve the burning question; for the first time the person elected by the majority of the nation can eliminate from his inaugural address that stereotyped chapter in which my illustrious predecessors deplored the horrors of anarchy and rebellion, heretofore the dark end of our electoral struggles. In its room you will permit me to say that peace is now a fact, a right of the Republic, and that hereafter our political battles, however energetic they may be, will be always limited within the just bounds of the law.

ARGENTINE FOREIGN RELATIONS.

Not only has the Argentine Republic enjoyed six years of uninterrupted peace within her own borders—six years devoted to the great work of developing the resources and making sure the wonderful possibilities which the country possesses—but there has continued to be no interruption in the friendly relations which have for so many years characterized its intercourse with other nations. The long pending question of the boundary line with Brazil was settled by a treaty of the date of September 28, 1885, and in pursuance of its terms each nation has appointed commissioners whose decision will be final. A difference with Chili on account of the seizure by that power of the French bark Jeanne Amelia, while loading guano at the mouth of the river Santa Cruz, near the Straits of Magellan, has also had a friendly termination and the damages claimed duly paid by the Chilian Government, thus removing the last vestige of the old boundary question between the two nations.

TERRITORIAL PROGRESS.

In a former report I referred to the organization of territorial governments for the Gran Chaco and Misiones in the extreme northern limits of the Republic and the dividing up of Patagonia into a number of distinct territorial governments, in order thus the better to promote and secure the development of that part of the country. These territorial subdivisions have been of great service in this respect, and from all parts of that hitherto neglected and desolate country now come to us reports of the opening of new settlements and the stocking of new cattle estancias. The forests, the rivers, the wide ranges of meadow, and the mines which have thus been rescued from the possession of the savages represent an incalculable wealth to the Republic; and at the rate at which they are now progressing it will not be long before all these territories will be admitted as States or provinces by the national Congress.

During the last year Colonel Fontana, governor of Southern Patagonia, made an extended expedition with a company of hardy Welsh pioneers from Chupat up to the headwaters of the river of that name in the sub-Andean regions. During an absence of four months, in which they traversed over 3,000 miles, he reports that they discovered a most magnificent country, with great lakes, rich valleys, fine pastures, dense woods, and all the elements necessary for supporting a large population, close under the Cordilleras, with passes quite accessible through to the Pacific. He says:

> Who could have believed that such a paradise could have remained unknown for so many centuries? Who could have supposed that the barren wastes and stony steppes of the Patagonian seaboard were the outer margin of a land teeming with fertility and delightful water-courses near the Andine slopes?

He collected specimens of eleven kinds of timber, among which were red cedar, white and red pine, two varieties of beech, a pitch tree (*calafate*), and others suitable for cabinet-work. There was also a profusion of cryptogamia, mosses, lichens, and various mushrooms, two kinds of which were found to be good and savory; and game, large and small, of great variety and immense quantities. "In fact," says Governor Fontana, "in these regions nature has been as exuberant and lavish as in the Misiones or the Gran Chaco."

Explorations have also been made south of the river Gallegos, and such excellent pasturage has been found along the northern shores of the Straits of Magellan—in the neighborhood of the recent gold discoveries—that large quantities of sheep have already been sent across there from the Falkland Islands.

In Terra del Fuego likewise have there been several exploring expeditions, and not a little of that inhospitable wilderness is found to be made up of good pasturage and rich valleys, and already stocked with cattle by the natives. Other expeditions are already in preparation, and we shall probably in a short time know much more of that "land of fire."

From Buenos Ayres now there are regular lines of steamers running to Carmen de Patagones and up the winding Rio Negro as far westward almost as the Cordilleras, all that valley now being a succession of sheep and cattle estancias. A railroad is already projected from Bahia Blanca (an extension of the Great Southern Railway) to Carmen de Patagones, while another road is now under contract from the deep anchorage of New Bay to the Welsh colony of Chupat, a distance of about 40 miles. The movement not merely of cattle-farmers, but of newly arrived immigrants, to the southern portions of the national territory during the last year has been very marked.

THE WORK OF RAILWAY CONSTRUCTION.

The work of railway construction has been prosecuted with more than usual activity during the past year.

The extension of the Central Northern road is now completed a distance of 270 kilometers beyond Tucuman, and most of the work is ready for the superstructure as far as Salta. One hundred kilometers of road have likewise been completed between Rosario de la Frontera and Metan. The work between Chilcas and the Rio Pasagè is in progress, and the whole line will be pushed during the coming year, as also the branch from Dear Funes to Chilceto, a distance of 415 kilometers.

All the accessory works of the branch of the Northern Central to Santiago del Estero have been finished, and also of the branch to Chumbicha, 176 kilometers, and both lines have been opened to the public service.

The road from Buenos Ayres to Rosario, a distance of 305 kilometers, finished at the date of my last annual report, has been running regularly during the last year, thus reducing the time between the two places to seven hours. It is now being extended on to Sunchales, 45 kilometers, and will soon be completed to that point.

A second road, projected in the interest of the Buenos Ayres and Pacific road, is now under construction from here to Mercedes, in this province, where it is to connect with the said Pacific road, now completed as far as Mercedes, in the province of San Luis, a distance of 336 kilometers. It is now being further pushed on to Orellanos, 355 kilometers, to which place it will be finished in a few months. From Mendoza westward the last link in the Andine road is now under contract.

Various other roads have been projected, and for some of these concessions have been obtained from the Government; among these is a railway from Bahia Blanca directly across the Andes by a new pass to Chili, and another from Buenos Ayres also across the Andes to Chili by a southern pass.

As showing the progress which railway construction has been making in the Argentine Republic, I may say that in October, 1880, the total number of kilometers was 2,318, of which 810 belonged to the national Government, 348 to the provincial government of Buenos Ayres, and 1,104 were in private hands. There are now 6,152 kilometers in the Republic, of which 1,877 belong to the nation 1,104 to the provincial governments, and 3,161 to private companies; a gain of about 3,834 kilometers in a little over five years.

PUBLIC PORT WORKS.

Another class of public works in which the Government is now engaged is the building of ports at several important points. In my last annual report I referred to the provision which the Argentine Congress had made for the erection of most extensive port works and docks in front of the city of Buenos Ayres, $10,000,000 having been directly appropriated for the purpose, and a contract for the work having been signed with Señor Eduardo Madero. Since then the engineers have completed the surveys and they have been duly approved by the Government. It is supposed that the work will be commenced early in 1887. The importance of this port to the commerce of Buenos Ayres can hardly be overestimated. I accompany this with a sketch of the proposed harbor.

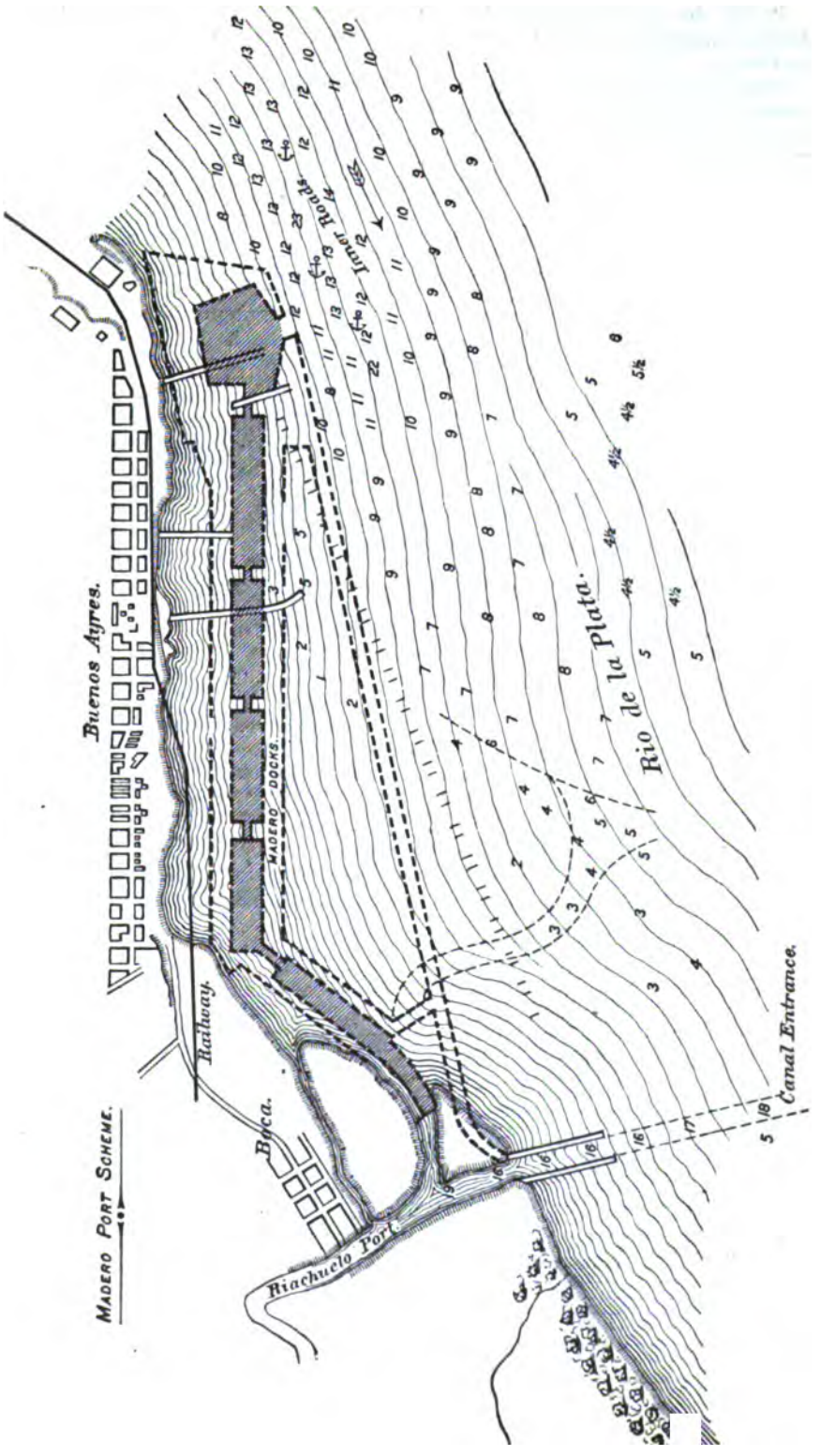
The deepening of the Riachuelo Canal, just to the south of the city, has also been persistently prosecuted during the last year, and that port will continue to be a complementary harbor to the city of Buenos Ayres. In this view the Government has contracted with both the Southern and Western Railways for the erection of extensive moles and warehouses on the Riachuelo, which are to be built at the expense of those companies and placed under the control of the Government.

Besides these ports, there has been constructed during the past year a very extensive mole at Bahia Blanca, built by the Southern Railway; also one at Alalaya, and others are being constructed at Zorate, at Rosario, at Santa Fé, at Concepcion del Uruguay, at Gualeguachú and at Corrientes, the whole entailing a total cost to the Government of over $600,000. The construction of these ports will greatly assist the river commerce of the Argentine Republic.

INTERIOR NAVIGATION.

This river commerce, comprehending the Rio de la Plata, the Uruguay, the Paraná, and their various affluents, is every year assuming larger proportions. The following table shows the total movement for 1885 compared with that of 1884:

Class.	Arrivals.				Departures.			
	1884.		1885.		1884.		1885.	
	No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
Sailing vessels	16,399	554,453	18,011	675,261	18,057	644,708	19,766	784,089
Steamers	6,884	1,875,222	8,113	2,276,851	6,929	1,834,066	8,072	2,319,681
Total	23,283	2,429,675	26,124	2,952,112	24,986	2,478,774	27,848	3,053,770


Buenos Ayres.
Railway.
Boca.
Riachuelo Port.
Rio de la Plata.
Canal Entrance.
MADERO PORT SCHEME.

It will be seen that the total movement was 48,269 vessels, with 4,908,449 tonnage, in 1884, against 53,972 vessels, with 6,005,882 tonnage, in 1885.

The following table shows the percentage of steamers and sailing vessels respectively engaged in the river trade since 1880:

Year.	Steamers.	Sailing vessels.	Year	Steamers.	Sailing vessels.
	Per cent.	*Per cent.*		*Per cent.*	*Per cent.*
1880	62	38	1883	74	26
1881	72	28	1884	76	24
1882	73	27	1885	77	23

At this rate the sailing vessels, which mostly consist of small schooners, will soon be entirely superseded by steamers. Of this river navigation 41.6 per cent. belonged to Buenos Ayres; 25.7 per cent. to Rosario; 13.9 per cent. to Santa Fé, and 3 per cent. to Paraná, the smaller river towns being credited with the balance. Of the vessels engaged in the river trade, 46.1 per cent. carried the Argentine flag; 32.9 per cent. the French flag; 10.2 per cent. the English flag; 2.5 per cent. the Uruguayan flag; 2.3 per cent. the German flag; 1.7 per cent. the Italian flag, and 4.3 per cent. the flags of other nations.

MOVEMENTS OF INTERNAL COMMERCE.

The movement of merchandise by the river craft during the year 1885 compared with that of 1884, is given below:

Years.	Produce of the country.	Imported merchandise.	Total.
1884	$24,615,401	$29,689,475	$44,304,876
1885	17,556,491	31,382,385	48,938,876

A gain of about $4,500,000 in the year.

The following table shows the most important articles, the produce of the country, which made up the river shipments during the year 1885:

Articles.	Quantity.	Value.
Liquors ..... liters..	3,031,470	$344,442
Sugar ..... kilograms..	14,063,167	1,828,211
Lime ..... do....	2,372,761	700,147
Vegetable black ..... hectoliters..	1,091,804	1,091,804
Jerked beef ..... kilograms..	4,488,848	586,710
Meat extract ..... do....	52,474	114,948
Wheat ..... do....	38,944,376	3,799,865
Eggs ..... dozens..	295,008	73,752
Soap ..... kilograms..	278,164	27,815
Wood for fuel	.....	121,316
Linseed ..... kilograms..	12,358,198	617,906
Woods	.....	566,276
Corn ..... kilograms..	28,460,655	569,873
Peanuts ..... do....	5,072,169	164,880
Fence posts ..... number..	650,990	182,954
Oranges ..... thousand..	15,860	37,174
Potatoes ..... kilograms..	20,218,252	808,731
Limestone ..... do....	71,130,238	142,384
Pickets ..... number..	194,803	99,841
Cheese ..... kilograms..	248,614	50,305
Tanned hides ..... do....	61,724	493,792
Wheat ..... do....	62,160,113	2,522,685
Yerba maté ..... do....	451,817	56,529

In regard to the river traffic, I may add here that the great development of which it is susceptible has lately attracted the attention of foreign capitalists, who have not only invested deeply in existing lines of steamers, but are now building in England a number of new craft for the trade. It is intended that some of these new steamers shall be constructed after the style of the Mississippi River boats, with flat bottoms and the machinery on deck, thus insuring very light draught and enabling them to navigate the smaller rivers and affluents of the Parana, on all of which there are appearing small towns and commercial centers, and in the neighborhood of which agricultural settlements are everywhere springing up.

OUTLOOK OF AGRICULTURE.

In regard to the progress of agriculture in the Argentine Republic, I have lately made so many special reports that it is hardly necessary to dwell upon it here. As new agricultural laborers are arriving by every steamer and passing into the interior, it is impossible, in the absence of official statistics, to state positively the breadth of land now under cultivation, but all reports concur in the opinion that the crop which is now almost ready for the harvest will by all odds be the greatest, not only in the number of acres in cereals, but in the yield per acre, that has ever been produced in the country. While the Government itself has abandoned the idea of special Government colonies, finding it better to let those seeking to engage in agriculture buy or rent wherever they can do so to their own best advantage, yet it has charged the agricultural department to put forth special efforts for the improvement of the varieties of grain grown in the country, and for the introduction of the very best breeds of cows, sheep, and horses, and for the promotion especially of viticulture. The following table of exports of crop products will give some idea of the progress which the agricultural industry is making in the Argentine Republic:

Articles.	1883.	1884.	1885.
	Kilograms.	*Kilograms.*	*Kilograms.*
Wheat	60, 754, 677	108, 499, 228	78, 498, 892
Flour	4, 844, 385	3, 734, 389	7, 447, 077
Indian corn	18, 634, 351	113, 710, 088	197, 859, 612
Barley	177, 909	362, 558	2, 109, 368
Baled hay	11, 640, 500	11, 846, 071	13, 765, 011
Linseed	23, 161, 736	33, 991, 650	60, 426, 104
Peanuts	2, 617, 292	1, 992, 655	2, 229, 557
Potatoes	1, 382, 606	310, 339	483, 389

SUGAR, RUM, AND WINE PRODUCT.

The production of sugar in the provinces of Tucuman and Santiago del Estero last year is given by the minister of finance to have been 32,000 tons, while the wine crop of Mendoza San Juan, and Cordoba amounted to 3,890,000 gallons, and the production of rum reached to 1,540,000 gallons. There is no doubt that these home products are beginning to compete with the foreign articles, but the yield at home is not equal to the demand, and so the imports from abroad continue large, as will be seen from the following figures:

Year.	Sugar.	Liquor.	Wine.
	Tons.	*Gallons.*	*Gallons.*
1883	24, 020	2, 210, 000	13, 860, 000
1884	34, 910	2, 684, 000	17, 820, 000
1885	19, 040	1, 140, 000	12, 540, 000

Arguing from these figures the finance minister congratulates the country that "before long it will not only cease to import wine, sugar, and rum, but begin to export these products to other countries."

IMMIGRATION.

Meanwhile the volume of immigration from Europe, in great part consisting of agriculturists, goes on increasing year by year. I have only recently made a full report to the Department on this subject, and hence it may be sufficient to say in this connection that the number of immigrants who arrived here during the year 1885 was 108,722 against 77,805 in 1884, and 63,243 in 1883. Of the arrivals of 1885, 63,501 were Italians, 4,314 Spaniards, and 4,752 French; the rest being Germans, Swiss, Austrians, English, &c. They consisted of 53,290 farmers, 6,935 day laborers, and the rest belonging to different mechanical trades. Thus far during 1886 the number of European arrivals is put down at about 70,000, and will probably reach to 100,000 before the end of the year. The greater portion of these immigrants are entirely impecunious, having little more than a bag of clothing, and some of them a few articles of household furniture. The portion that embark in farming generally are sent forward at once at the expense of the nation to the agricultural colonies either in this province or that of Santa Fé, where they provide themselves with farms of a few acres in extent, either by renting or buying on long time, payable in yearly installments, from private parties.

THE PRICE OF LANDS.

The great mistake the government makes in regard to its public lands is that it does not divide them up into small parcels for the benefit of and within the means of men of little means who desire places for their own actual settlement. Instead of this the national lands are put up for sale at auction, at a given base of so much per league, and of course in this way they are entirely out of the reach of arriving immigrants. During the last year the Government disposed of 516 square leagues in the territory of Neuquen, at an average of $2,019 per league, one-sixth cash. A large portion of the public domain has already in this manner passed into the hands of private speculators. As it may be of interest to know the current market prices of such lands, I take from a recent circular of Messrs. Pico & Gornez, land agents of this city, the following average of sales for the last three months in different parts of the Republic:

Locality.	No. of leagues.	Price.	Price per square league.
Province of Buenos Ayres	117	$3,319,000	$28,400
Province of Cordoba	22	166,000	7,580
Province of Entre Rios	2	50,000	25,000
Province of Mendoza	11	23,000	2,100
Province of Santa Fé	91	697,000	7,700
Frontiers of Argentine Republic	86	347,000	4,040
Republic of Paraguay	151	50,000	330
Total	480	4,652,000	9,720

These sales show an extraordinary range of prices, from 5 cents per acre in Paraguay to $4.30 per acre in the province of Buenos Ayres.

There is, however, an extreme range of prices even here in the province of Buenos Ayres, as will be seen from the following sales, also reported by the same agent:

County or partido.	Price per league.	County or partido.	Price per league.
Azul	$36,000	Lincoln	$17,000
Baradero	200,000	Mercedes	210,000
Bahia Blanca	25,400	Magdalena	71,000
Bragado	43,500	Monte	150,000
Bolivar	20,000	Navarro	115,000
Carmen de Areco	174,000	Peguajó	21,500
Cañuelas	50,000	Pergamino	76,000
Chascomus	80,000	Puyrredon	25,000
Chivilcoy	110,000	Puan	30,000
Dolores	88,500	Ranch	24,000
Gilles	145,000	Saladillo	60,000
Guamini	10,500	Salta	63,000
Juarez	26,000	Suarez	22,000
Las Flores	25,000	San Antonio	160,000
Las Heras	90,000	3rd section	10,000
Loberia	37,000	4th section	3,400

The medium price in the province of Buenos Ayres has been $68,000 per square league, or a little over $10 per acre. The average, however, of the sales was only $28,400 in consequence of the bulk of the sales having been in partidos or counties remote from this city, and hence of less value. These lands are all for grazing purposes, being rolling prairie or pampa, entirely devoid of timber.

THE NATIONAL FORESTS.

The timber of the country is all in the far interior or along the upper rivers, where exist in their primitive condition thousands of leagues of the most magnificent hard woods to be found anywhere in the world. I have already referred in former reports to movements which have been made for shipping them to Europe, and of the laws which have been passed by the Argentine Congress for their protection against a vast army of trespassers, who make their living by appropriating to themselves all that they can cut and float out of the country. The custom-house returns for this reason show but a small portion of the timber which leaves the River Plate for foreign ports. The shipments reported to the custom-house last year amounted to only $339,020 against $394,848 in 1884. The President, in his last message to the Argentine Congress, referred to the importance of a law which would better protect the national forests and save them from the devastation which they are now subject to; but that body adjourned without taking any action in the matter.

DISCOVERY OF COAL.

The question of coal deposits in the Argentine Republic, about which there has in the past been so much doubt and uncertainty, is gradually approaching an affirmative solution. In my last annual report I referred to the discoveries made by Colonel Oloscoago, in the southern portion of the province of Mendoza; as also the discoveries announced by an American miner in the province of San Juan. We now have information that "coal of first-class quality and abundant" has been discovered at two different points, one forty leagues and the other fifty leagues south of San Rafael, a small town in the province of Mendoza. Likewise Prof. L. Brackenbush, of the University of Cordoba, who has

been making scientific researches on the estate of Sr. Igarzabal, near Paganso, in the province of Rioja, announces to the public that "coal is there, rich and abundant and only thirty kilometers from the Colorados Railway station on the Chilceto and Dean Funes Railway line." A plan of the deposits has been drawn up with a view to their exploration. So I suppose the "conundrum" of coal or no coal may now be considered as fully answered in the affirmative.

PETROLEUM.

I may add here that a company has lately been formed in this city for working the petroleum deposits, heretofore announced by me to have been discovered near the city of Mendoza. We now have intelligence that at a depth of 120 meters the deposit was reached, and that a steady stream of pure petroleum comes to the surface. The news has caused some stir here, in view of the great and constant demand all over the Argentine Republic for kerosene oil, the bulk of which now comes from the United States. Owing, however, to the distance from the River Plate at which this Argentine petroleum is found and the expense of transportation, I doubt if it will be able to compete in price with the American article, unless the Argentine Government puts on a prohibitive tariff.

MINES AND MINING.

The miners in the interior of the Republic offer nothing new since my last annual report. We are persistently informed that the various companies which have been formed to work the mines in the provinces of San Luis and Rioja are in a way to do a large and profitable business; but while their machinery is of the most extensive and elaborate character, thus far their operations have been very limited, and scarcely anything to show for their labors. The following figures show the total shipments from the country during the year 1885:

Description.	Quantity.	Value.
	Kilograms.	
Copper in bars	170,114	$67,996
Copper ore	86,962	16,015
Lead in bars	19,130	2,320
Lead ore	85,497	6,334
Total		82,675

A very sorry exhibit, in which neither gold nor silver cuts the least figure, though it may be that those metals, instead of being shipped from the country, were turned into the national mint of this city for coinage. I very much doubt this, however, as such a fact would have been paraded at the time. The returns show that during 1885 the following metals were imported for coinage:

Gold	$948,272
Silver	1,298,869
Copper	267
Total	2,247,408

Whether the gold and silver mines of the interior are yielding or not, those of Bolivia seem to have been in very active operation. During

1885 there passed through this country from Bolivia, *in transitu* for Europe, the following quantities of the different metals:

Description.	Quantity.	Value.
	Kilograms.	
Bismuth	239,037	$808,743
Tin	142,504	59,433
Silver and silver ore	349,529	4,158,742
Gold dust	899	427
Virgin silver	140,531	5,267,278
Coined silver	101	3,737
Total		10,298,360

As I have had occasion to say before, there is yet very little known in a practical way in regard to the mineral wealth of the Argentine Republic, and much that is stated for fact is mere guesswork. I still believe that there are valuable deposits in the provinces of Rioja, San Luis, and Mendoza, but the "big bonanza" which is to make a fortune for somebody has not yet been discovered.

The following little scrap of history in regard to the mines of Rioja has been furnished to the Buenos Ayres Standard and may be interesting:

The Famatina mines seem to have been worked by the Incas, many of the workings being certainly over 200 years old, and yet no tradition exists respecting them. It is well known that mines were systematically worked by the Jesuits of Nonogasta, who are supposed to have taken out vast quantities of treasure, most of it being devoted to the decoration of churches at Rioja and other places. Shortly before the expulsion of the Fathers, in 1776, they destroyed so completely every trace of their working that the exact site is still a mystery.

Mexicana is an extensive region remarkable for gold deposits, comprising a ridge which connects the two mountain chains known as Ampallado and Nevado. Towards the close of the last century some Mexicans or Peruvians found here a gold lode in a spot 13,800 feet above sea-level, and having taken out considerable quantities of gold departed as they had come.

Arragonesa takes its name from two natives of Arragon who used to sell great lots of silver but would never allow any one to follow them to their mine. Just as they were preparing to return to Spain with a large fortune one of them was shot for a spy, the other dying shortly afterwards of grief, and taking his secret to the grave. No one has ever discovered the scene of their labors, although close on 100 years have elapsed.

In 1824, during the mining mania in England, an engineer named French came to report on Famatina, and soon afterwards a company was formed and workmen were sent out. But the civil wars stopped everything. The German superintendent became an estanciero, seeing it impossible to commence mining, and was shot by Quiroga.

There is a variety of metals. The Espino mines, in Mexicana district, are of copper, with an alloy of gold and silver. At Caldera and Cerro Negro are the silver mines of Parchappe and Almonacid. Most of the mines are worked by the indigenous population in a small way, Chilecito and Famatina containing at least 20,000 souls who have no other livelihood. They go up to the mountains with provisions for a couple of months, attack the ore wherever they find it, and live on the proceeds for the rest of the year.

Competent persons in Rioja say that the annual output of the mines is something over $200,000, the labor and expenses not exceeding $60,000. But it is believed that the industry has starved for want of capital and machinery, and that well-directed scientific work would give dividends of 50 per cent. per annum during many years, as on the San Juan del Norte in Brazil. On this account all the more importance is attached to the labors of M. Fouert, a distinguished mining engineer, who came from France with a complete staff in 1883, went to work on the most approved rules at Famatina, and has solved the problem so satisfactorily that his coming marks a new era, the renaissance of Rioja. Previously there was much waste of labor, shafts sunk here and there, adits and tunnels varying from 30 to 300 feet deep, in some places profitably, but often the reverse. Fuel is cheap and abundant, but freight is dear, owing to the scarcity of mules. The ordinary yield of the Mexican mines is 8 marks of

silver or 3 cwt. of copper per ton, leaving a margin of profit. In the Tigre district is an old mine of the time of the Incas, which has given silver at intervals.

Heretofore Rioja has been unable to turn its great mining wealth to any profit for three reasons: firstly, that capital and machinery are requisite; secondly, that the remoteness of Famatina and Chilecito placed an obsatcle almost insurmountable; thirdly, that there were not mules enough in the province. Such is the unanimous opinion of disinterested persons who know more on the subject than we do, and it is impossible to refuse to give them a hearing or treat their views as visionary.

In regard to the reported gold discoveries of Southern Patagonia, a full account of which I sent to the Department about a year ago, I can only say that there has yet been very little outcome. Interested persons still insist that there is gold at Cape Virgins; and, under permits from the Argentine Government, various parties are now down there with all the necessary appliances for "gathering it in." Thus far, however, there has arrived nothing here to show for their work; and the locality does not seem to be one where the precious dust would be found in very paying quantities. Still we may yet have a satisfactory confirmation of the first reports of the "find"; and now also comes up to us from Tierra del Fuego a rumor that at the foot of the mountains in the Bay of San Sabastian the gold-hunters of Chili have come upon gold deposits of great richness and promise. There is, however, such an air of unreality about nearly all the reputed gold mines of the Argentine Republic that I put this last report in the strictest quarantine until further developments.

FISHERIES.

In reference to the fisheries of the Argentine Republic there is noth ing to be said. There are no fisheries here in the American sense of the word. The coasts from Cape San Antonio to the Straits of Magellan offer the finest opportunities in the world for extensive sea fishing, the varieties of oily and other fish occupying a deservedly high rank in the estimation of all who have any acquaintance with them. Among these are the curbina negra, a very large fish, which somewhat resembles the salmon; the lisa, which is analogous to the mackerel, but larger; the pescadilla, which is something like a shad without the bones; and anchoa, an oily fish which is regarded as the finest to be found on the Argentine coast. The rivers also are everywhere teeming with fish; among which I may mention the perjerey or king's fish, the brotula, the dorado or gold-fish, which grows to an immense size the raia, the bagre, &c. So, likewise, at various points on the southeast coast, are the finest locations that could be desired for oyster-beds, and the bivalve is found in the greatest quantities; but all this wealth remains entirely undeveloped for the simple reason that there is nobody to engage in the business. Now that the Southern Railroad is opened through to Bahia Blanca, the finest bay on the Argentine coasts, whereby fish and oysters can be transported through to Buenos Ayres without trouble and without delay, there is no longer any excuse for the apathy which exists in regard to this most valuable industry. Some years ago the Argentine Congress passed a law which prevents fishing on its coasts without first obtaining a concession from the Government; but I believe that to parties who desired to embark in the business the Government could offer the most satisfactory inducements.

THE WOOL PRODUCT.

The wool clip of 1885 was the largest ever known in the Argentine Republic, and it was generally delivered in such condition as to command fair prices. As a matter for reference, I bring the table of ship-

ments of wool and sheep-skins from 1875 down to the end of last year as follows:

Shipments of wool and sheep-skins since 1876.

Year.	Wool.		Sheep-skins.	
	Quantity.	Value.	Quantity.	Value.
	Kilograms.		*Kilograms.*	
1876	89, 259, 122	$20, 332, 387	27, 597, 973	$4, 624, 758
1877	97, 310, 463	18, 707, 218	27, 849, 009	4, 664, 754
1878	81, 708, 196	15, 215, 358	27, 848, 593	4, 031, 149
1879	91, 951, 094	22, 330, 388	25, 088, 873	4, 097, 864
1880	97, 145, 801	27, 467, 671	29, 077, 187	5, 455, 327
1881	103, 876, 955	31, 446, 495	22, 339, 591	4, 639, 487
1882	111, 009, 796	29, 978, 960	22, 353, 021	4, 231, 718
1883	118, 403, 668	29, 600, 918	26, 564, 619	5, 035, 886
1884	114, 344, 648	32, 005, 819	24, 938, 623	5, 484, 952
1885	128, 393, 264	35, 950, 111	31, 336, 894	6, 267, 377

Owing to the losses of sheep during the present year, more than 20,000,000 having perished from the floods or from epidemic, it is understood that there will be a deficit in the wool shipments of 1886, though for the same reason the shipments of sheep-skins will be increased.

It will be observed that in 1885 the total shipments of wool and sheep-skins amounted in value to $42,247,488, being a little more than one-half of the entire declared exports for that year. The following table shows the countries to which the shipments of wool and sheep-skins were made:

Shipments for the year 1885.

Country.	Wool.		Sheep-skins.	
	Quantity.	Value.	Quantity.	Value.
	Kilograms.		*Kilograms.*	
Germany	24, 331, 358	$6, 812, 780	1, 502, 057	$318, 611
Belgium	34, 341, 898	9, 615, 731	2, 756, 139	551, 227
Brasil	8, 523	2, 386	391	78
United States	4, 239, 699	1, 187, 115	163, 074	32, 615
France	59, 149, 582	16, 561, 886	20, 883, 900	4, 176, 780
Italy	1, 675, 408	469, 114	752, 826	150, 565
Great Britain	1, 987, 014	556, 364	3, 939, 120	787, 824
Switzerland	132, 888	37, 207		
Uruguay	1, 531, 913	428, 935	789, 238	157, 848
Other countries	994, 987	278, 596	460, 149	92, 029
Total	128, 393, 264	35, 950, 111	31, 336, 894	6, 267, 377

The wool shipped as above to the United States was exclusively the Cordoba or carpet wools; the export duty here and the tariff of the United States making it impossible to export the other varieties without loss.

THE SALADERO INDUSTRY.

Owing to the repeal of this export duty on jerked beef, the saladero or slaughtering industry of the Argentine Republic has considerably increased within the last two years. The following table gives the comparison:

Article.	1884.	1885.
Dry hides	$5, 894, 306	$7, 511, 919
Salted hides	2, 923, 602	4, 488, 204
Jerked beef	2, 456, 997	4, 204, 077
Bones and bone-ash	621, 619	782, 464
Hide cuttings	84, 139	80, 485
Horns	118, 795	159, 896
Tallow	2, 150, 228	3, 489, 169
Total	14, 249, 686	20, 716, 214

This shows a total increase of $6,466,528 during 1885; and during the present year the industry has exhibited even greater development, the repeal of the export tax making it possible to ship at paying rates to both European and American markets.

FRESH-MEAT EXPORTS.

The business of shipping frozen mutton carcases to European markets has considerably increased during the last year. There are now several establishments at different points on the rivers devoted especially to this industry. The custom-house returns show that during 1885 there were shipped to England and Italy from the ports of this country 2,862,270 kilograms of frozen mutton carcases, valued at $75,323. During the present year the shipments have very largely exceeded this amount, but I am unable to obtain the exact figures. In regard to the prospects and profits of the business there appears to be some question. The shipments do not seem to meet a ready sale, and in some cases have had to be stored for paying prices. The prices obtained have ranged from 3*d.* to 5½*d.*, but most sales were the lower figures. Most of the carcases sent from this market are not fattened so well as those which go from the States. The flesh is not firm, and in many instances is thin or "plain." The "River Plate Fresh Meat Company," which was the pioneer in the business in this country, has not been able to declare any dividend on the last year's business; but when more economy is practiced in preparing the meat for shipment, and the companies engaged in the business instruct the growers of sheep into the mysteries of fattening the animals properly, the trade may become more promising.

On this subject I find the following in the "European Mail" of a late date:

> With the view of improving its financial position, the directors of the River Plate Fresh Meat Company are now making arrangements for opening up a business with continental cities. Two thousand carcases have been sent to Paris and favorably spoken of. Meanwhile the results of the working for the past year are not such as to enable the board to declare a dividend on the ordinary shares. The reasons for this unfortunate state of affairs were set forth by Mr. G. W. Drobble in presiding over the fourth ordinary general meeting on October 13th. It appears that 191,721 sheep were killed, frozen, and shipped to this country by the company between July 1, 1885, and June 30, 1886, as against 187,578 during the previous twelve months, but prices have not been kept up. The average per pound for the year 1884–'85 was 4.475*d.*, and this year it was 4.383*d.* It is a matter of small comfort for the shareholders to know that they are not alone in this reduction. Having seen a statement that a large quantity of River Plate mutton had been condemned as unfit for food, the chairman took occasion to remark that out of the 191,000 carcases imported by the River Plate Fresh Meat Company only 17 had been condemned. The report was adopted, and the writing off 20 per cent. from the initial expenses, 5 per cent. from refrigerating machinery, and 7½ per cent. from the hull of the La Nevera approved.

There is also now a movement on foot to engage in the export, on a large scale, of fine cattle. One party has made an application to the Government for a guarantee on the capital invested in this enterprise, he proposing to organize a line of steamships with special reference to their capacity to carry live stock; but such a business would be attended with so many difficulties and drawbacks, when we consider that the voyage from the River Plate to Europe occupies not less than twenty-five days, or nearly three times as long as between the United States and Europe, and must be made across the heated tropics, that I doubt very much if it could be made to pay, especially when it is so much safer and so much cheaper, and so much more convenient to export the dead meat. But stall-fed cattle are something quite unknown

in the Argentine Republic. All the beef that comes to market is fed on green grass entirely, and lacks that firmness and hardness so necessary for a long sea voyage; and I doubt if there would be much left of a grass-fed bullock, no matter how fat he might be, after undergoing the hardships and privations of a crowded transportation to Europe.

FOREIGN NAVIGATION OF THE ARGENTINE REPUBLIC.

The carrying trade of the Argentine Republic with other nations during the year 1885 will be seen from the following resumé, compiled from the figures published by the natural statistical office, to wit:

Movement of foreign tonnage.

Class of vessels.	Arrivals.		Departures.		Total.	
	No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
Sailing vessels	4,908	771,583	2,441	600,858	7,349	1,372,441
Steamers	6,671	2,829,726	6,549	2,748,803	13,220	5,578,529
Total	11,579	3,601,309	8,990	3,349,661	20,569	6,950,970
Total in 1884	10,976	3,012,363	8,187	2,852,292	19,163	5,864,413
Increase	603	588,946	803	497,369	1,406	1,086,557

From a study of these figures it will be seen that steam now represents 80 per cent. of the foreign carrying trade of the Argentine Republic, while sailing vessels represent only 20 per cent.

To show the increase which has taken place in steam navigation during the last ten years, I append the following suggestive figures:

Year.	Steam.	Sail.	Year.	Steam.	Sail.
	Per cent.	*Per cent.*		*Per cent.*	*Per cent.*
1876	68	32	1881	71	29
1877	66	34	1882	73	27
1878	68	32	1883	75	25
1879	71	29	1884	77	23
1880	76	24	1885	80	20

The following tables show the arrivals and departures of sailing vessels at and from the different ports of the Argentine Republic:

Arrivals and departures of sailing vessels to and from each port.

To and from—	Arrivals.		Departures.	
	No.	*Tons.*	*No.*	*Tons.*
Bahia Blanca	19	9,557	17	7,859
Baradero	16	177	11	4,467
Buenos Ayres	3,557	562,835	1,406	415,935
Compana	97	16,964	68	17,951
Concepcion	32	1,957	32	935
Concordia	334	13,174	253	12,771
Corrientes	49	1,698	12	752
Gualeguay	31	4,112	41	9,403
Gualeguaychú	74	6,206	74	3,493
La Paz	8	389	12	1,226
Monte Careros	66	1,091	43	990
Parana	23	2,073	14	1,478
Rosario	214	68,525	186	71,425
San Nicolas	63	14,897	32	9,905
Santa Fé	13	2,958	20	10,952
Victoria	12	317	3	97
Zarate	10	661	18	6,789
Other ports	290	43,990	190	19,801
Total	4,908	771,583	2,441	600,858

The arrivals and departures of steamers at and from the different ports of the Argentine Republic will be seen from the following table:

Arrivals and departures of steamers to and from each port.

To and from—	Arrivals.		Departures.	
	No.	*Tons.*	*No.*	*Tons.*
Bahia Blanca	4	5,945	2	2,938
Bella Vista	243	66,690	245	68,629
Buenos Ayres	1,687	1,043,512	1,542	989,326
Concepcion	536	119,425	596	219,362
Concordia	819	227,239	804	233,880
Corrientes	252	65,718	197	50,406
Esquira	171	46,058	118	29,298
Goya	247	53,388	237	61,757
Gualaguaychú	451	160,646	537	178,068
La Paz	271	68,536	242	72,184
Monte Caseros	164	11,551	157	11,422
Paraná	259	67,459	225	60,724
Rosario	450	411,913	401	296,545
San Nicolas	104	125,221	99	112,357
Zarate	1	1,278	3	3,827
Other ports	1,012	283,152	1,144	362,580
Total	6,671	2,829,726	6,549	2,748,803

From the two foregoing tables it will be seen that of the total foreign shipping 44 per cent. belonged to Buenos Ayres; 12 per cent. to Rosario; 7 per cent. to Concordia; 6 per cent. to Concepcion, and the balance to a dozen smaller ports.

The following table shows the arrival and departures of sailing vessels from and to each country:

Arrivals and departures of sailing vessels from and to each country.

To and from—	Arrivals.		Departures.	
	No.	*Tons.*	*No.*	*Tons.*
Africa			15	5,086
Germany	37	13,455	11	3,534
West Indies	21	9,659	259	130,782
Austria			2	1,882
Belgium	21	8,293	21	8,346
Brasil	128	16,407	211	65,614
Canada	33	21,611	2	1,627
Chili	2	528	47	29,071
Spain	61	27,751	28	8,036
United States	344	183,402	311	117,038
France	64	24,042	44	20,287
East Indies	9	1,121	22	11,553
Italy	34	15,732	14	5,752
Mexico			3	1,054
Holland	2	1,204	1	478
Paraguay	197	25,746	73	7,993
Peru			1	235
Portugal	3	1,512	5	1,672
Great Britain	462	210,153	314	103,269
Swoden	10	1,865	1	179
Uruguay	3,449	205,466	1,100	58,478
Venezuela			2	706
Other countries	31	3,636	44	18,884
Total	4,908	771,583	2,441	600,858

The following table gives the arrivals and departures of steamers from and to each country during the year 1885:

Arrivals and departures of steamers from and to each country.

To and from—	Arrivals.		Departures.	
	No.	*Tons.*	*No.*	*Tons.*
Germany	116	171, 312	120	175, 975
Belgium	49	61, 180	102	132, 249
Brazil	347	52, 092	370	70, 758
Spain	37	44, 473	16	21, 895
United States	5	5, 880	14	17, 504
France	125	182, 088	191	310, 625
Italy	83	141, 506	60	103, 995
Holland	.....	.....	2	2, 418
Paraguay	1, 088	297, 437	1, 106	208, 951
Great Britain	327	444, 149	217	292, 019
Uruguay	4, 493	1, 429, 523	4, 345	1, 309, 594
Other countries	1	91	6	6, 820
Total	6, 671	2, 829, 726	6, 549	2, 748, 803

From the last two tables it appears that 43 per cent. of the foreign shipping of the Argentine Republic was with Uruguay, 13 per cent. with Great Britain, 9 per cent. with Paraguay, 8 per cent. with France, 5 per cent., respectively, with the United States and Germany, and with all other countries 17 per cent.

The arrivals and departures of sailing vessels, according to flag, will be seen from the following table:

Arrivals and departures of sailing vessels according to flag.

Flag.	Arrivals.		Departures.	
	No.	*Tons.*	*No.*	*Tons.*
German	111	30, 797	113	37, 558
Brazilian	88	7, 528	55	4, 190
Spanish	79	17, 253	71	16, 861
French	8	1, 958	6	2, 052
English	420	197, 514	323	168, 839
Italian	251	103, 597	229	106, 355
Paraguayan	118	7, 387	35	3, 185
Uruguayan	1, 481	62, 519	512	18, 251
United States	130	71, 612	136	86, 164
Argentine	1, 971	115, 106	595	26, 094
Other nations	351	156, 312	366	131, 395
Total	4, 908	771, 583	2, 441	600, 858

The arrivals and departures of steamers, according to flag, will be seen from the following table:

Arrivals and departures of steamers according to flag.

Flag.	Arrivals.		Departures.	
	No.	*Tons.*	*No.*	*Tons.*
German	117	171, 443	121	173, 260
Belgian	30	41, 607	23	28, 279
Brazilian	312	58, 247	303	62, 476
Spanish	14	15, 381	13	17, 558
French	1, 126	593, 628	1, 038	588, 354
English	1, 553	796, 419	1, 501	809, 855
Italian	69	113, 478	110	121, 572
Argentine	2, 651	831, 788	2, 303	704, 987
Paraguayan	112	15, 756	60	8, 423
Uruguayan	642	122, 535	617	124, 400
Other nations	45	60, 044	460	109, 639
Total	6, 671	2, 829, 726	6, 549	2, 748, 803

From this table it will be seen that Buenos Ayres last year had 75.7 per cent. of the imports and 62 per cent. of the exports, and 69 per cent. of the entire foreign commerce of the Argentine Republic; and that Rosario, standing next, had 12.9 per cent. of the imports, 14.8 per cent. of the exports, and 13.8 per cent. of the entire foreign commerce; San Nicolas, Concordia, and other minor ports standing for the rest.

MOVEMENTS OF ARGENTINE TRADE ACCORDING TO NATIONALITY.

The foreign commerce of the Argentine Republic for 1885 was distributed among the following countries, to wit:

Countries.	Imports.	Exports.	Total.
Africa	.....	$42,080	$42,080
Germany	$7,262,999	8,512,443	15,775,442
West Indies	78,527	1,433,584	1,512,111
Belgium	7,463,898	14,883,506	22,347,399
Bolivia	1,412,718	248,800	1,661,518
Brazil	2,206,612	2,169,700	4,376,402
Canada	815,501	.....	815,501
Chili	45,074	2,494,256	2,539,330
Spain	3,189,331	2,241,873	5,431,206
United States	7,006,719	5,563,841	10,570,560
France	14,545,195	24,164,829	67,710,024
Italy	4,207,946	2,448,014	6,655,960
Holland	545,522	67,009	612,531
Paraguay	1,471,783	160,121	1,631,904
Portugal	95,234	224,126	318,360
Great Britain	35,375,628	12,816,341	48,191,969
Sweden	32,764	37,207	69,971
Uruguay	4,241,700	3,367,866	7,609,566
Other countries	2,225,823	3,003,412	5,229,235
Total	92,221,909	83,879,100	176,101,069

COMPARISONS BETWEEN 1884 AND 1885.

If we compare the trade returns of the Argentine Republic of 1885 with those of 1884 we will find that the imports have increased from the following countries:

IMPORTS.

Country.	Increase.	Country.	Increase.
West Indies	$77,726	Portugal	$19,043
Belgium	214,106	Chili	33,841
Bolivia	1,245,619	Great Britain	4,647,234
Canada	247,850	Sweden	17,491
Paraguay	67,739		

From the following countries the importations have diminished:

Country.	Decrease.	Country.	Decrease.
Germany	$1,605,931	France	$2,240,395
Brazil	126,344	Holland	559,069
Spain	1,511,459	Uruguay	1,441,146
United States	448,113	Other countries	711,272

EXPORTS.

The exports from the Argentine Republic for 1885, compared with those of the previous year, have increased to the following countries:

Country.	Increase.	Country.	Increase.
Africa	$26,116	France	$1,646,458
Germany	698,730	Italy	643,530
West Indies	635,054	Holland	65,461
Belgium	3,561	Paraguay	66,174
Bolivia	26,056	Portugal	164,253
Brazil	707,355	Great Britain	4,604,904
Chili	413,333	Sweden	37,207
Spain	724,197	Uruguay	1,257,017
United States	1,498,993	Other countries	712,777

And during the same period it has not decreased from any country.

TOTAL TRADE.

The total trade, including imports and exports, for 1885, compared with that of 1884, has increased from the following countries:

Country.	Increase.	Country.	Increase.
Africa	$25,116	United States	$1,050,880
Germany	92,799	Italy	854,832
West Indies	712,780	Paraguay	123,911
Bolivia	1,281,675	Portugal	233,296
Brazil	581,101	Great Britain	10,252,838
Canada	247,850	Sweden	54,698
Chili	445,174		

And the following countries show a decrease in the total amount of their trade with the Argentine Republic:

Country.	Decrease.	Country.	Decrease.
Spain	$788,262	Uruguay	$184,626
France	593,937	Other countries	98,945
Holland	494,208		

From the tables of imports and exports, it will appear that for the year 1885, 38.4 per cent. of the import trade of the Argentine Republic was with Great Britain, 15.8 per cent. with France, 8 per cent. with Belgium, 7.9 per cent. with Germany, and 7.6 per cent. with the United States.

It will also appear that 28.8 per cent. of the exports went to France, 17.7 per cent. to Belgium, 15.3 per cent. to Great Britain, 10.2 per cent. to Germany, and 6.6 per cent. to the United States.

It will further appear that 27.4 per cent. of the total commerce of the Argentine Republic for 1885 was with Great Britain, 22 per cent. with France, 12.7 per cent. with Belgium, 9 per cent. with Germany; and 7.1 per cent. with the United States.

PERCENTAGE OF TRADE FOR TEN YEARS.

As a point of some interest I subjoin the following table, which shows the relative course of trade of the Argentine Republic with each country during the last ten years:

Country.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Germany	3.9	3.9	4.0	3.9	4.7	6.6	7.9	8.4	9.7	9.0
West Indies	1.4	1.6	1.9	1.6	1.6	1.0	1.3	0.9	0.5	0.9
Belgium	19.0	17.4	15.2	13.3	12.2	15.5	14.1	11.0	13.7	12.7
Bolivia	0.7	0.7	0.4	0.7	0.8	0.5	0.4	0.2	0.2	0.9
Brazil	4.1	5.2	5.0	6.0	4.2	3.9	3.5	2.8	2.3	2.5
Chili	4.7	4.6	3.3	1.6	1.7	1.6	1.3	1.6	1.3	1.4
Spain	3.9	3.7	4.1	3.1	3.5	4.1	3.5	3.6	3.3	3.1
United States	5.2	5.7	6.3	8.2	8.0	7.3	6.6	6.0	7.1	7.1
France	20.5	20.4	23.0	22.0	23.4	23.7	23.5	25.9	24.2	22.0
Italy	5.1	4.0	4.2	4.6	4.5	4.6	3.3	3.6	3.6	3.7
Holland	0.7	0.7	0.6	0.3	0.3	0.4	0.9	0.4	0.7	0.4
Paraguay	1.2	1.4	1.2	1.3	0.8	1.2	1.0	1.1	0.9	0.9
Great Britain	19.5	18.0	19.1	17.0	17.1	17.5	22.3	26.2	23.4	27.4
Uruguay	3.8	5.3	3.8	3.9	4.9	4.6	4.1	4.5	4.8	4.3
All other countries	6.3	7.6	3.3	7.3	3.3	7.5	5.8	3.3	3.3	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

These relative figures show that while there has been a remarkable uniformity in the course of the trade of the Argentine Republic during the last ten years, Belgium appears to be the only country that has decidedly lost her position; and that, while England and France have continued to maintain and even increase their relative ascendency, the United States and Germany, in spite of the annually increasing bulk of the total trade, have shown quite a regular progression of increase in their percentage.

DETAILS OF THE FOREIGN COMMERCE OF THE ARGENTINE REPUBLIC.

I have compiled the following table from the official figures of the Argentine national statistical office; they purport to give the amount and custom-house value of each article of import and export of the Argentine Republic for the year 1885:

IMPORTS.

Articles.	Quantity.	Official value.
Animals.		
Asses ..... number	15	$440
Horses ..... do	487	21,708
Hogs ..... do	3	200
Sheep ..... do	15,455	62,411
Mules ..... do	2	20
Horned cattle ..... do	2,007	42,631
Total		127,410
Groceries and comestibles.		
Olive oil ..... kilograms	6,462,014	1,378,543
Olive oil in bottles ..... dozens	4,264	12,970
Olives ..... kilograms	259,143	43,859
Starch ..... do	755,951	126,337
Rice ..... do	12,556,741	1,097,715
Sugar:		
White ..... do	936,963	128,088
Refined ..... do	17,983,161	3,324,092
Unrefined ..... do	117,401	13,903

IMPORTS—Continued.

Articles.		Quantity.	Official value.
Groceries and comestibles—continued.			
Fish, dried	kilograms	612,240	$95,762
Cocoa	do	122,194	31,212
Cinnamon	do	10,175	5,418
Coffee	do	2,439,476	759,964
Preparations of meat			68,004
Barley	kilograms	77,799	8,149
Chocolate	do	90,546	90,546
Cocoa	do	59,695	38,568
Confectionery and dulces			108,564
Spices and condiments			437,948
Farina	kilograms	2,149,849	107,492
Maccaroni	do	89,309	7,471
Vegetables, preserved	do	54,262	17,627
Fruits, dried and preserved	do		340,070
Fruits, fresh			49,948
Flour, wheat	kilograms	2,076	214
Flour of other grain	do	94,221	17,181
Hams	do	96,969	54,176
Vegetables, dried	do		141,293
Butter	do	1,104	572
Lard	do	137,101	43,898
Hard bread and crackers, &c	do	37,461	9,642
Fish, preserved			462,314
Fish, fresh			760
Cheese	kilograms	1,009,104	595,322
Sausages	do	40,548	26,513
Tea	do	309,394	309,394
Bacon	do	1,560	775
Wheat	do	16,699	667
Yerba:			
Paraguayan	do	4,355,849	761,378
Brazilian	do	9,830,877	1,267,207
Total			12,090,034
Liquors, &c			
Mineral waters, bottles	dozens	17,721	43,062
Beer	liters	95,299	39,538
Beer, bottles	dozens	204,896	461,978
Cider, bottles	do	547	1,159
Brandy, bottles	do	64,619	318,768
Gin	liters	1,817,650	192,189
Gin, bottles	dozens	20	58
Caña	liters	209,402	29,312
Alcohol and other liquors	do	2,070,490	353,790
Alcohol and other liquors, bottles	dozens	152,339	626,797
Sirups			450
Wines:			
Champagne, bottles	dozens	7,011	55,466
Sherry, bottles	do	1,013	5,906
Port, bottles	do	13,081	77,244
Bordeaux, bottles	do	16,493	65,490
Other kinds	do	39,483	116,690
Sherry, in casks	liters	35,538	17,550
Port, in casks	do	102,806	49,030
Bordeaux, in casks	do	22,525,526	3,340,280
Other kinds, in casks	do	34,491,340	3,378,934
Vinegar	do	100,991	7,089
Total			8,180,702
Tobacco.			
Cigars:			
Havana	kilograms	12,832	102,349
Other kinds	do	179,231	217,834
Cigarettes	do	4,377	5,607
Tobacco in the leaf:			
Havana	do	55,672	27,450
Other kinds	do	3,461,067	754,532
Tobacco, cut:			
Havana	do	72,289	53,896
Other kinds	do	269,202	128,403
Snuff	do	12,843	15,410
Total			1,305,481

IMPORTS—Continued.

Articles.		Quantity.	Official value.
Woven goods, &c.			
Oil cloths	kilograms	1,315	$264
Matting	meters	150,934	39,906
Sacking			65,332
Shag	meters	361,753	324,277
Pack cloth	kilograms	7,029,977	1,439,557
Pack thread	do	1,604,846	1,317,148
Felt	meters	57,717	43,195
Sail cloth	kilograms	278,227	305,294
Cassimeres	do	462,875	995,672
Do	meters	191,342	292,134
Ribbons			147,169
Cording			13,233
Laces			363,440
Thread:			
In carrots	kilograms	93,219	36,158
Sewing			336,866
Silk			247,826
Impermiable cloth	kilograms	113,824	66,238
Cordage			241,581
Duck	kilograms	789,628	426,397
Wicking	do	126,070	126,121
Billiard cloth		5,290	19,149
House linen			89,089
Soles for alpargata shoes	dozen	99,828	49,373
Do	kilograms	792,649	247,400
Cotton goods	do	4,304,207	3,158,289
Do	meters	3,262,802	817,304
Hempen goods	kilograms	86,353	34,165
Do	meters	360	115
Linen goods	kilograms	132,508	196,535
Do	meters	378,507	119,558
Woolen goods	kilograms	465,882	1,070,615
Do	meters	227,225	85,697
Mixed goods	kilograms	806,996	1,494,701
Do	meters	922,838	313,837
Silk goods	kilograms	22,892	332,198
Do	meters	73,651	21,904
Other woven goods	kilograms	140,349	42,964
Do	meters	8,997	3,149
Silk velvets	kilograms	5,274	63,298
Cotton goods made up, not otherwise specified			621,188
Hempen goods made up, not otherwise specified			110,869
Linen goods made up, not otherwise specified			189,457
Woolen goods made up, not otherwise specified			419,437
Mixed goods made up, not otherwise specified			337,484
Silk goods made up, not otherwise specified			291,801
Other woven goods made up, not otherwise specified			594,777
Chints and calicoes	kilograms	1,546,655	1,962,902
Total			19,014,976
Clothing, &c.			
Shirts	dozens	23,897	211,808
Undershirts	do	74,893	297,316
Drawers	do	8,048	55,913
Cravats			71,709
Gowns and skirts	dozens	6,365	40,103
Cuffs and collars	do	19,582	36,059
Stockings	do	504,643	629,309
Pocket handkerchiefs	do	104,286	183,074
Towels	do	9,638	26,575
Men's ready-made clothing			761,479
Umbrellas and parasols			50,416
Hats and caps			507,329
Total			2,821,090
Drugs and chemicals.			
Sulphuric acid	kilograms	577,971	28,668
Muriatic acid	do	15,356	1,398
Nitric acid	do	8,694	1,745
Other acids			22,554
Linseed oil	kilograms	369,704	68,649
Palm oil	do	51,908	10,163
Other oils			76,653
Alcohol	liters	245,390	162,081
Alum	kilograms	36,664	3,617

IMPORTS—Continued.

Articles.		Quantity.	Official value.
Drugs and chemicals—Continued.			
Ammonia	kilograms	4,022	$1,310
Indigo	do	895	1,686
Sulphur	do	55,908	3,780
Tar	do	164,981	20,759
Varnish	liters	80,606	45,404
Soda	kilograms	11,345	939
Borax	do	21,469	6,439
Chloride of lime	do	23,941	2,385
Magnesia	do	900	397
Carbonate of soda	do	108,333	9,494
Glue	do	71,884	14,424
Coloring matters			245,731
Fire-crackers			54,436
Stearine	kilograms	143,366	31,130
Essences			18,648
Specifics for sheep scab			234,736
Phosphorus	kilograms	818,545	98,277
Gums	do	144,797	43,147
Glycerine	do	3,910	2,057
Iodine of potassium	do	173	604
Soap, common	do	55,720	16,110
Medicinal preparations			576,443
Perfumery			202,353
Potassium	kilograms	27,660	5,589
Powder	do	44,614	25,089
Pharmaceutical products			98,679
Chemical products			180,554
Calcined soda	kilograms	1,802,959	104,101
Sulphate of iron	do	19,215	902
Sulphate of magnesia	do	1,558	110
Sulphate of quinine	do	1,034	46,530
Printing ink	do	4c,888	12,961
Vasaline, common	do	730	357
Plaster Paris		101,109	3,318
Total			2,497,349
Lumber and wooden ware.			
Pine lumber	square meters	9,550,329	4,219,611
Walnut lumber	do	279,015	80,386
Other lumber			451,945
Trunks	number	2,615	5,827
Carts and carriages	do	248	40,403
Staves and casks	do	23,237	27,485
Musical instruments			76,285
Boats and launches	number	24	104,432
Furniture in general			420,581
Pianos	number	926	212,121
Canes			13,016
Other wooden articles			254,113
Total			5,906,805
Paper.			
Writing paper	kilograms	341,637	98,433
Drafting paper	do	10,618	5,501
Printing paper	do	2,351,383	593,679
Wall paper	do	226,250	95,691
Wrapping paper	do	1,495,717	340,284
Cover paper	do	10,084	4,499
Cigarette paper	do	187,177	125,150
Drying paper	do	12,246	4,348
Sand-paper	do	5,637	15,642
Albums			9,171
Playing cards	gross	3,737	33,414
Pasteboard	kilograms	331,859	50,726
Papier maché			172,900
Other manufactures of paper			147,250
Blank books			125,404
Printed books			311,760
Music	kilograms	4,958	4,958
Total			2,139,879
Leather, &c.			
Boots and shoes			338,240
Pocket-books, card-cases, &c			25,433
Trunks and valises			8,966
Saddles			27,971

IMPORTS—Continued.

Articles.	Quantity.	Official value.
Leather, &c.—Continued.		
Leather gloves		$36,221
Harness		67,266
Other manufactures of leather		84,600
Skins of various kinds		60,326
Leather of various kinds		653,686
Total		1,513,709
Iron and its manufactures.		
Wire for fencing ..... kilograms	22,359,663	1,514,374
Fire-arms		193,873
Needles ..... thousand	33,444	21,928
Wire, not otherwise specified ..... kilograms	1,904,507	197,375
Kitchen utensils		296,394
Nails ..... kilograms	2,505,903	224,234
Chains		61,539
Iron safes	104,648	25,702
Iron piping		198,593
Stoves and stove-pipes ..... kilograms	35,100	5,324
Cutlery		287,027
Elastic springs ..... kilograms	249,965	39,439
Iron in bars ..... do	3,592,039	180,665
Iron ornaments		1,478,310
Iron and steel unworked ..... kilograms	33,483,887	3,384,984
Iron tools		346,025
Iron furniture		28,627
Iron joists and columns		382,359
Plows ..... number	8,493	90,328
Reapers ..... do	2,792	471,522
Threshing-machines ..... do	145	205,913
Shovels, spades, and hoes		89,396
Other implements		116,351
Pumps ..... number	2,656	26,747
Sewing-machines ..... do	15,650	241,745
Lithographic and printing presses ..... do	144	54,166
Machinery and motors, not otherwise specified		1,167,096
Other manufactures of iron		126,321
Total		11,468,894
Materials for construction.		
Materials for water-works		1,331
Materials for railways		10,282,995
Materials for gas-works		71,307
Materials for mines		9,230
Materials for port works		1,744
Materials for drainage works		342,134
Materials for works at La Plata		795,144
Materials for telegraphs		130,268
Materials for telephones		3,218
Materials for tramways		105,029
Materials for sugar-mills		97,176
Total		11,840,067
Metals and their manufactures.		
Jewelry		491,409
Copper and brass, unworked ..... kilograms	59,214	33,617
Copper and brass, manufactured		82,800
Copper for coining ..... kilograms	668	267
Tin composition ..... do	158,075	40,253
Tin composition, manufactured		1,788
Scientific instruments		53,339
Musical instruments		35,990
Tin in sheets ..... kilograms	1,919,449	199,797
Tin, manufactured		30,056
Metallic belting		253,499
Silver metal ..... kilograms	5,292	52,920
Gold for coining ..... do	1,552	948,322
Silver in bars ..... do	29,967	1,131,254
Silver coined (Bolivianos)		164,615
Lead ..... kilograms	743,122	72,041
Lead manufactured		35,949
Watches, gold ..... number	5,466	98,891
Watches, other metals ..... do	25,636	117,059
Clocks ..... do	23,657	48,991
Scales and balances ..... do	3,403	25,448

IMPORTS—Continued.

Articles.	Quantity.	Official value.
Metals and their manufactures—Continued.		
Printing type ..... kilograms..	86,386	$43,846
Zinc ..... do....	1,054,618	109,339
Zinc manufactured	.....	4,503
Total	.....	4,075,996
Stone, glass, and ceramic products.		
Tiles ..... thousand..	18,135	309,192
Glass bottles ..... do....	223,184	66,981
Lime ..... hectoliters..	3,939	2,567
Crystals for watches, &c	.....	4,526
Glassware	.....	289,639
Lamps	.....	254,988
Crockery ware	.....	275,277
Marbles and alabaster, unworked	.....	52,394
Marbles and alabasters, cut	.....	79,042
Marbles and alabasters, set	.....	9,653
Mill stones	.....	915
Precious stones, unset	.....	184,356
Lithographic stones ..... kilograms..	351,336	7,583
Grindstones	.....	11,057
Stones for constructions	.....	353,040
Tiles for roofing ..... square meters..	32,761	12,413
Porcelain ware	.....	165,121
Tiles for flooring ..... thousand..	3,974	183,594
Hydraulic cement ..... kilograms..	20,544,222	472,632
Glass and crystal plate ..... square meters..	521,058	159,863
Glass and crystal mirrors	.....	133,070
Total	.....	3,027,902
Combustibles, &c.		
Stearine candles ..... kilograms..	353,999	100,264
Other candles ..... do....	61,694	18,460
Stove coal ..... do....	268,073,260	2,770,471
Coke	440,261	7,485
Wax matches	95,818	75,719
Wooden matches	19,258	6,356
Kerosene	5,161,799	476,452
Total	.....	3,455,207
Various manufactures, &c.		
Fancy articles	.....	1,128,170
Pitch ..... kilograms..	284,581	19,585
Benzine	359	125
Shoe blacking	.....	27,711
Buttons ..... gross..	287,991	107,892
Corks ..... kilograms..	132,208	54,362
Sponges	.....	6,550
Boxes	.....	3,778
Gutta-percha articles	.....	8,728
Toys	.....	125,638
Pencils	.....	17,160
Hops ..... kilograms..	31,398	21,893
Works of art	.....	57,335
Religious ornaments	.....	9,965
Rosin ..... kilograms..	1,975,636	95,704
Straw, rushes, &c	.....	101,003
Steel pens ..... gross..	34,437	8,718
Plants and shrubs	.....	14,691
Salt ..... hectoliters..	474,994	294,678
Leeches	.....	628
Writing inks ..... kilograms..	55,720	9,559
Apothecary utensils, &c	.....	29,783
Various articles	.....	681,806
Total	.....	2,826,468
Total importations	.....	92,221,969

EXPORTS.

Articles.	Quantity.	Official value.
Live animals:		
Asses ..... number..	11,316	$22,632
Horses ..... do....	3,251	36,260
Hogs ..... do....	2	4
Sheep ..... do....	42,235	58,552
Mules ..... do....	6,685	106,960
Horned cattle ..... do....	96,175	2,345,312
Animal oils ..... kilograms..	197,486	29,622
Horns, ox ..... do....	1,142,120	159,896
Horns, rams ..... do....	118,473	2,369
Bran ..... do....	5,758,090	87,482
Peas ..... do....	99,850	1,196
Canary seed ..... do....	519,250	31,155
Preserved meat and jerked beef ..... do....	32,055,835	4,204,077
Frozen sheep carcasses ..... do....	2,862,270	75,323
Stove coal ..... do....	274,370	2,743
Vegetable black ..... do....	67,690	67,690
Lime ..... hectoliters..	5,939	4,335
Barley ..... kilograms..	2,109,368	42,189
Bones and bone ash ..... do....	35,423,768	782,464
Hair ..... do....	2,009,298	1,004,649
Wax ..... do....	2,456	859
Copper in bars ..... do....	170,014	67,996
Goat skins ..... do....	1,744,772	1,061,762
Kid skins ..... do....	320,525	641,050
Carpincho skins ..... do....	828	414
Sheep skins ..... do....	31,336,894	6,267,377
Nutria skins ..... do....	323,901	198,737
Ox hides, dry ..... number..	1,931,092	7,511,919
Ox hides, salted ..... do....	811,679	4,488,204
Horse hides, dry ..... do....	43,770	65,651
Horse hides, salted ..... do....	329,595	632,260
Various skins ..... do....	.....	69,685
Joists and sleepers ..... do....	18,490	40,470
Ñandubay posts ..... do....	34,008	4,421
Fruit ..... do....	.....	21,922
Hide cuttings ..... kilograms..	1,235,524	86,485
Guano ..... do....	765,265	31,187
Flour ..... do....	7,447,077	521,295
Old iron ..... do....	80,000	160
Wool ..... do....	128,393,264	35,950,111
Linseed ..... do....	69,426,104	3,471,805
Hard woods ..... do....	.....	190,734
Corn (maize) ..... do....	197,859,612	3,957,191
Peanuts ..... do....	2,229,557	89,182
Split ñandubay posts ..... number..	221,157	66,347
Copper, mineral ..... kilograms..	86,962	16,055
Lead, mineral ..... do....	35,497	6,334
Honey ..... do....	7,098	706
Potatoes ..... do....	483,379	19,335
Baled hay ..... do....	13,765,011	165,587
Pepsin ..... do....	56,548	56,548
Empty casks ..... number..	76	76
Pickets ..... do....	82,932	41,466
Beans ..... kilograms..	22,611	1,131
Lead in pigs ..... do....	19,180	2,330
Ostrich feathers ..... do....	34,710	60,741
Cheese ..... do....	14,680	2,926
Dried blood ..... do....	445,090	14,082
Alfalfa seed ..... do....	7,397	296
Turnip seed ..... do....	393,440	24,245
Grease and tallow ..... do....	23,200,294	3,489,169
Tanned hides ..... number..	614	4,912
Tobacco ..... kilograms..	2,898	290
Wheat ..... do....	78,493,392	3,139,736
Other articles of national production	.....	484,864
Various re-exported articles	.....	252,795
Total exports	.....	82,289,507

BALANCE OF TRADE.

I have so often referred to the tendency to overtrading, which for several years past has manifested itself in the Argentine Republic, and which has brought on so many of the mishaps which have overtaken Argentine financiering, that it is scarcely necessary to dwell upon the

subject in the present report. A mere restatement of the course of trade during the last few years is all that is required to show the stumbling block in the way of a satisfactory condition of the monetary affairs of the country. The following are the imports and exports of the Argentine Republic from 1879 to 1885, inclusive:

Year.	Imports.	Exports.	Total.
1879	$46, 362, 506	$49, 357, 558	$85, 721, 150
1880	45, 535, 880	38, 380, 767	103, 916, 667
1881	55, 705, 927	57, 938, 272	113, 644, 199
1882	61, 246, 045	60, 388, 939	121, 634, 984
1883	80, 435, 828	60, 207, 976	140, 643, 804
1884	94, 056, 144	68, 029, 836	162, 085, 980
1885	92, 231, 969	81, 288, 475	176, 101, 069

The years from 1879 to 1882, inclusive, were marked by quite a satisfactory condition of trade, the exports during that period quite equaling the imports, and thus not requiring any active drain of money from the country. Since then, however, there has been no proper balance between what the country bought abroad and what it sold, the exports running far behind the imports, and the imports persistently exceeding the limit of commercial safety. The balances against the country which have had to be met for the last three years were as follows:

Year.	Balance against the country.
1883	$20, 227, 852
1884	26, 027, 308
1885	10, 933, 594
Total in three years	57, 188, 754

In the face of these figures, it is not surprising that the banks could not furnish exchange in sufficient quantities to meet the demand; nor ultimately, when they had drained themselves of their balances abroad, that they had not the gold to exchange over their counters for their bank notes. The suspension of specie payments which followed was a natural consequence of the situation; and there will continue to be a suspension of specie payments just so long as this excessive overtrading continues. The loans which have been made by the Government, as I predicted, have had the effect to tide over the commercial collapse which overtook the country two years ago; but the business outlook is but little better now than it was then. It is true, the excess of imports over the exports in 1885 was not so great by half as in the two previous years, and there has been an increase in the value of the exports of over thirteen millions of dollars—a very gratifying indication of the wealth and recuperative energies of the people—but the imports are still out of proportion to a healthy condition of trade. The country continues to receive more from abroad than the actual wants of the people require. The Argentine Republic does not possess the population, without intrenching on its capital, to consume the immense quantities of unproductive merchandise which England, France, and Germany, with a stagnant trade at home, continue year after year to foist upon this country. The population of the Argentine Republic to-day is but very little in excess of that of 1881, and yet the following table shows the almost un-

broken arithmetical progression which has taken place in unproductive imports:

Articles.	1881.	1882.	1883.	1884.	1885.
Food of all kinds	$6,888,210	$10,466,507	$11,957,555	$15,314,819	$12,020,034
Liquors	7,795,967	6,905,886	9,316,816	11,439,358	8,069,702
Tobacco	1,005,488	978,500	1,233,201	1,114,104	1,305,481
Cotton, woolen, and silk goods	10,229,371	14,000,148	16,482,772	16,836,772	19,014,976
Total	25,919,036	32,351,041	38,990,207	44,705,053	40,520,193

The manner in which the excessive importations of cotton, woolen, and silk goods have increased in the last five years is especially worthy of notice.

EXPORTS.

In regard to exports, from which we in great part judge of the prosperity of a country as showing the surplus products of industry, the returns of 1885 exhibit a very gratifying increase over those of the previous year. The increase in the most important items of export is seen in the following table:

Articles.	Increase.	Articles.	Increase.
Bones and bone ash	$160,845	Jerked beef	$1,747,080
Sheep-skins	782,425	Live cattle	534,480
Goat-skins	702,082	Linseed	1,771,723
Ox hides (dry)	1,617,613	Corn (maize)	1,682,990
Ox hides (salted)	1,564,602		
Wool	3,944,292	Total	15,847,469
Grease and tallow	1,339,337		

The tables of exports show that in 1885 wool stood for about 45 per cent. of the entire amount; hides for 12.5 per cent., and sheep skins for 8 per cent.

COMMERCE OF THE ARGENTINE REPUBLIC WITH EACH COUNTRY.

The commerce of the Argentine Republic with the different countries with which it is engaged in trade, for the year 1885, shows pretty much the same general features that the trade returns of 1884 present. As then, I proceed to a closer inspection of the principal classes of merchandise which go to make up the trade of the more important countries, as a matter which cannot fail to be of interest to our own merchants and manufacturers.

ARGENTINE TRADE WITH GERMANY.

I have in previous reports referred to the remarkable exhibit which the Argentine trade with Germany presents:

Total trade in 1885	$15,775,442
Total trade in 1876	3,254,981
Increase in ten years	12,520,461

Under the patronage of a number of strong German commercial houses, which have been established in this city as also in Rosario, there has been a systematic push to increase the sale of German manufactures on the River Plate, and likewise to divide the wool trade of the Argentine Republic. The above figures show with what success.

The principal imports from Germany in 1885 consisted of the following articles:

Articles.	Value.	Articles.	Value.
Comestibles and groceries	$992,119	Manufactures of iron, including sewing machines	$589,780
Liquors and beer	452,530	Jewelry, &c.	185,583
Tobacco and cigars	81,220	Crockery and glassware	401,660
Cotton and woolen goods	1,897,504	All other imports	1,096,708
Ready-made clothing and confections.	569,660		
Drugs and chemicals	510,873	Total imports	7,262,999
Furniture, including 504 pianos	394,561		
Boots and shoes, &c	90,801		

The exports show an increase of upwards of $2,000,000 in the shipments of wool. They were as follows:

Articles.	Value.	Articles.	Value.
Wool	$6,812,780	Corn	$162,067
Ox hides	536,568	Various other products	1,288,942
Horse hides	393,675		
Sheep skins	318,411	Total exports	8,512,448

There is little doubt from present appearances that the German trade with the Argentine Republic has a satisfactory future before it. What has greatly added to its growth and will insure its permanency are the German lines of steamships, which now afford direct and rapid transit between the two countries.

ARGENTINE TRADE WITH BELGIUM.

There has been but little difference in the amount of trade between this country and Belgium during the years 1884 and 1885. For the former year it was $22,129,731; for the latter, $23,347,399. The imports consisted of:

Articles.	Value.	Articles.	Value.
Comestibles and groceries	$890,426	Materials for railways, tramways, public works, &c	$1,298,931
Liquors	215,608	Crockery, china, and glassware	460,971
Woolen and cotton goods, &c.	1,160,817	All other imports	556,870
Ready-made clothing and confections.	170,261		
Writing, printing, and other paper	357,118	Total	7,463,893
Boots and shoes	229,869		
Manufactures of iron, joists, columns, &c.	2,123,032		

The most important items in the exports from this country to Belgium were the following:

Articles.	Value.	Articles.	Value.
Wool	$9,615,731	Wheat (10,411,843 kilograms)	$416,474
Ox hides	2,073,466	Corn (25,422,516 kilograms)	508,450
Goatskins	551,227	All other exports	419,391
Grease and tallow	247,350		
Horsehair	292,989	Total	14,883,506
Linseed	768,428		

The wool exports of 1885 were $4,736,830 greater than that of the previous year.

ARGENTINE TRADE WITH BOLIVIA.

The trade overland between Bolivia and this country, which was opened during the late war with Chili, has continued to increase and begins to assume considerable proportions. The following are the figures for the last three years:

Direct trade.

Year.	Imports from Bolivia.	Exports to Bolivia.	Total.
1883	$65,097	$272,006	$338,003
1884	167,099	212,744	379,843
1885	1,412,718	248,800	1,661,518

The direct imports from Bolivia in 1885 consisted almost exclusively of silver, which amounted to $1,348,839. The exports from this country to Bolivia consisted of horses, cattle, and sheep driven over the mountains, $172,579.

But, besides this direct trade, there was a considerably increased transit trade, through the Argentine Republic, with European countries. Compared with last year this transit trade was as follows:

Transit trade.

Year.	From Bolivia.	To Bolivia.	Total.
1884	$6,371,902	$1,211,890	$7,583,793
1885	10,338,054	1,683,863	12,021,917

This transit trade is certified from the Rosario custom-house, from which place the transit begins by rail towards the northern frontiers, and thence by pack-mules over the pass. The merchandise from Bolivia consisted exclusively of silver, silver ore, copper, brass, tin, bismuth, &c. The following are the principal articles of merchandise sent to Bolivia:

Cotton, woolen, and other fabrics	$922,565
Ready-made clothing	232,603
Paper, furniture, boots, shoes	110,957
Iron manufactures	171,076
Fancy articles, &c	95,557

During the war American cotton took this direction to Bolivia; but whether the trade is still continued I have no means of knowing.

ARGENTINE TRADE WITH BRAZIL.

The trade between Brazil and the Argentine Republic exhibits about the same general condition which has always characterized it. There was a slight reduction in the imports from and a slight gain in the exports to that country, the total trade amounting to $4,376,402 in 1885 against $3,795,301 in 1884.

The imports consisted of—

Articles.	Value.	Articles.	Value.
Coffee	$566,402	All other articles	$239,443
Yerba or Paraguayan tea	871,076		
Sugar	79,390	Total imports	2,206,612
Tobacco	450,301		

The exports from the Argentine Republic to Brazil were:

Articles.	Value.	Articles.	Value.
Jerked beef	$1,286,720	Wheat	$81,258
Flour (4,145,862 kilograms)	290,210	All other articles	236,359
Corn (6,292,419 kilograms)	125,848		
Baled hay	149,395	Total exports	2,169,790

And in this manner the trade of the one country has just about balanced that of the other for the last ten years.

ARGENTINE TRADE WITH CHILI.

The trade between the Argentine Republic and Chili has shown no vitality for a number of years. Until this country embarked in the agricultural industry, a considerable proportion of the flour consumed here was imported from Chili, but all that is now at an end. The imports from Chili for the last five years have been a mere bagatelle. There are still large numbers of horned cattle and horses driven across the Andes from this country, and that is about the only trade there is between the nations. In 1885 the imports from Chili amounted to $45,074, mostly dried fruits and vegetables. The exports to Chili were cattle, mules, horses, &c., $2,246,728; grease and other things, $247,528; total, $2,494,256.

ARGENTINE TRADE WITH SPAIN.

There continues to be nothing in the trade between the Argentine Republic and Spain which is specially worthy of attention. There is a slight reduction on the figures of the previous year, the imports showing a decrease and the exports an increase. The imports of 1885 were:

Wines	$2,432,973
Common salt	221,125
All other articles imported	436,233
Total imports	3,189,331

The exports for the same year were:

Hides and pelts	$1,472,710
Jerked beef	210,078
Grease and tallow	316,643
Corn (2,752,936 kilograms)	55,058
Wheat (3,463,408 kilograms)	138,536
All other exported articles	148,750
Total exports	2,241,875

There is a growing demand in Spain for Argentine jerked beef, and the trade seems to be increasing.

ARGENTINE TRADE WITH FRANCE.

I have already in a former report referred to the close social and commercial relations which now exist between the Argentine Republic and France, and given the reasons for them. So long as the latter country continues to furnish the Argentines everything in the fashion line, and nearly everything in the drinking line, and a large part of its food and fancy articles, the importations from France are not likely to diminish to any great extent; while the new demand for Argentine wools, which now find a center of distribution at Dunkirk, makes the export trade a comparatively sure one. The principal imports in 1885 were:

Articles.	Value.	Articles.	Value.
Wines and brandies	$3,463,182	Jewelry	$755,948
Condiments and comestibles	2,220,348	China, glassware, &c	952,850
Cottons, woolens, and ready-made clothing	3,452,521	Objects of vertu, fancy, and fashion	940,811
Drugs, medicines, &c	489,357	And a thousand unenumerated articles	902,773
Writing, printing, and other paper	674,486		
Manufactures of iron	692,919	Total	14,545,195

The principal article of export is wool, and the portion of the Argentine clip which finds a market in France is increasing every year. The total wool export in 1885 was 128,393,264 kilograms, of which 59,149,582, or not quite one-half, was shipped to France; and the total shipments of sheep-skins was 31,336,894 kilograms, of which 20,883,900, or about two-thirds, were also sent to France. The following was the value of the principal articles exported:

Articles.	Value.	Articles.	Value.
Wool	$16,561,883	Linseed	$155,683
Sheep-skins	4,176,780	Hair	111,272
Goat-skins	544,165	Preserved meat	101,508
Ox hides	1,009,561	Other exports	279,808
Corn	982,859		
Grease and tallow	241,810	Total	24,164,829

What facilitates and makes easy the immense trade which thus exists between France and the Argentine Republic are the various lines of steamships which ply between this country and both the Atlantic and Mediteranean ports of France, whereby the two nations are brought within about twenty days of each other.

ARGENTINE TRADE WITH ITALY.

The Argentine trade with Italy offers but little that is worthy of noticei unless it be the fact that it is so small. When we consider how large a proportion of the population of this country are Italians, and what a steady stream of immigration is annually coming from Italy, it is surprising to find that the total Argentine trade with that country, which in 1876 was $4,268,689, had only reached to $6,655,960 in 1885, and this, too, notwithstanding the fact that there are several fast steamship lines running between the ports of Italy and the River Plate. I have already sought to explain the anomaly by the fact that the Italians

who come to the Argentine Republic are mechanics and farmers, and not commercial men. The imports from Italy in 1885 were:

Articles.	Value.	Articles.	Value.
Olive oil	$900,690	Paper and stationery	$420,730
Rice	347,284	Other articles	1,528,370
Wine	447,631		
Comestibles, cheese, macaroni, &c.	563,241	Total	4,207,946

The exports of 1885 to Italy are of no particular significance, of which the principal items were: Wool, $469,114; sheep-skins, $150,565; ox hides, $734,057; grease and tallow, $146,894; wheat, $339,797; corn, $286,354; flour, $59,936; frozen mutton, $33,717; all other articles, $228,580; total exports, $2,448,014.

ARGENTINE TRADE WITH HOLLAND.

The imports from Holland in 1885 consisted of the following items: Refined sugar, $373,794; cheese, $69,057; gin, $59,155; rice, $15,878; other articles, $27,628; total, $545,522.

The exports were wheat, corn, and linseed, $67,009.

ARGENTINE TRADE WITH PARAGUAY.

The direct trade of the Argentine Republic with Paraguay remains about at last year's figures. The imports were: Sugar, $76,614; yerba mate, $726,655; tobacco, $204,286; timber, $253,917; railway sleepers, $109,612; fresh fruit, $32,454; other articles, $68,245; total imports, $1,471,783.

The exports from the Argentine Republic to Paraguay consisted only of a few cattle and small quantities of wheat, flour, corn, &c., altogether amounting to $160,121.

The Paraguayan transit trade through this country amounted to $518,822, of which only 13,547 were shipments to foreign ports and $505,275 represented European merchandise *en route* to Asuncion. Of the latter the principal articles were:

Articles.	Value.	Articles.	Value.
Comestibles	$12,840	Manufactures of iron	$30,407
Liquors and wines	22,300	Other articles	58,386
Cotton and woolen goods	344,824		
Ready-made clothing	37,518	Total	505,275

During the last year or two quite a number of Germans have gone to Paraguay to engage in trade, and the greater part of these transit shipments arrived from Germany.

ARGENTINE TRADE WITH PORTUGAL.

During 1885 the imports from Portugal to the Argentine Republic were: Port wines, $88,097; other articles, $5,137; total, $96,234. The exports were: Grease and tallow, $212,304; other articles, $11,822; total, $224,126.

ARGENTINE TRADE WITH SWITZERLAND.

There were importations during 1885 of Swiss shoes (French) to the amount of $92,154; other articles, $5,566; total, $97,720. There were no exports from the Argentine Republic to Switzerland.

TRADE WITH ARGENTINE AND NORWAY AND SWEDEN.

There were imports of Norway pine lumber to the amount of $32,764 and exports of Argentine wool to the amount of $37,207—one cargo just about offsetting the other.

ARGENTINE TRADE WITH URUGUAY.

As I have heretofore mentioned, almost the entire commerce between Uruguay and the Argentine Republic consists merely of transshipment of foreign goods, which not finding a sale in one country are sent to the other, or of cargoes which are consigned "to order." These imports from Uruguay to the Argentine Republic, in 1885, amounted to $4,241,700; and the exports from this side of the river, which were simply sent down to Montevideo to find transshipment, amounted to $3,367,866, many of the most important houses in Buenos Ayres having branch houses in Montevideo.

ARGENTINE TRADE WITH GREAT BRITAIN.

In 1884, France occupied the first place in the total trade of the Argentine Republic, but the returns of 1885 show that Great Britain has once more gone to the front. The vitality which the trade with the latter country possesses is seen from the fact that the imports from the United Kingdom have quadrupled since 1876, and trebled since 1880. As a matter of reference, I give the total figures:

Year.	Imports.	Exports.	Total.	Year.	Imports.	Exports.	Total.
1876	$8,967,146	$7,446,599	$16,413,745	1881	$16,135,277	$3,889,424	$19,924,701
1877	9,847,960	5,528,302	15,376,262	1882	19,554,902	7,625,516	27,180,448
1878	11,901,968	3,615,909	15,517,877	1883	30,695,963	5,956,093	36,652,056
1879	12,431,467	3,878,969	16,310,436	1884	37,727,694	7,211,437	37,939,131
1880	12,506,923	5,341,033	17,847,967	1885	35,375,628	12,816,341	48,191,969

The significance of these figures will be understood when it is considered that the entire trade of the Argentine Republic has only doubled in the last ten years, being $84,160,735 in 1876 and $176,101,069 in 1885. Argentine trade has had no such development with any other country. This development, moreover, has been in great part in the matter of imports, England being the market whence this country obtains her industrial supplies, and London being the exchange where she negotiates her loans and keeps her bank account. The most important items in the list of imports from Great Britain, in 1885, were the following:

Articles.	Value.	Articles.	Value.
Comestibles and groceries	$779,380	Boots and shoes, furniture, papers, and fancy articles	1,141,414
Cotton, woolen, and linen goods	11,097,721	Coal and coke	2,634,702
Clothing and confections	766,729	Glass and stone ware	609,639
Drugs and chemicals	819,116	Other imports	312,715
Manufactures of iron	6,558,150		
Railways materials and machinery	9,289,893		
Gold for coining ($948,272) and jewelry	1,367,169	Total	35,375,628

In the matter of Argentine exports it cannot be said that England takes any particular interest, her food supply and raw materials coming to her in great part from her own colonies or from the United States. The returns show, however, that with the development of agriculture in the Argentine Republic, she would, in all probability, find the River Plate a good field from which to draw her breadstuffs, while the frozen meat industry, which is yet in its infancy in this country, promises a great development.

I give the principal exports for 1885:

Articles.	Value.	Articles.	Value.
Frozen and preserved meat	$184,552	Sheep-skins	$787,824
Linseed (45,880,014 kilograms)	2,294,022	Hides and pelts	1,384,402
Fine woods	136,144	Other items	3,077,879
Corn (maize), (81,876,272 kilograms)	1,637,525		
Wheat (45,096,938 kilograms)	1,803,478	Total	12,816,341
Tallow and grease	1,510,515		

Nearly all the business in the commercial line which Great Britain does in the River Plate is done through English houses or agents of the manufacturers, who have their establishments here on the spot, and who, with the facilities afforded in the matter of steamship lines and their own banks, must continue to have a monopoly of the importing trade.

ARGENTINE TRADE WITH THE UNITED STATES.

In volume the total trade of the Argentine Republic with the United States is $1,050,880 greater for 1885 than 1884. It is about three times greater than it was ten years ago, thus increasing more rapidly than the general trade of the entire country, which has only doubled within that time. Comparing the last two years together we have the following figures:

Year.	Imports.	Exports.	Total.
1884	$7,454,832	$4,064,848	$11,519,680
1885	7,006,719	5,563,841	12,570,560

From which it will be seen that, while there has been an increase of $1,498,993 in the amount of the exports from here to the United States, there has been a decrease of $448,115 in that of the imports. The latter fact, however, is a mere incident, for the importing trade from the United States shows a steady and very gratifying increase during the last ten years. It amounted to only $1,943,466 in 1876, thus showing, indeed, that it has almost quadrupled since that time.

DETAILED IMPORTS AND EXPORTS.

The whole story of our import and export trade with the Argentine Republic during the year 1885 will be seen from the following table, which I have taken from the returns made by the Argentine statistical office:

Imports from the United States.

Articles.	Quantity.	Official value.
Olive oil ..... kilograms..	1,352	$473
Starch ..... do....	383,629	45,438
Sugar, refined ..... do....	21,100	5,149
Cinnamon ..... do....	7,514	2,876
Canned meats	.....	2,396
Spices	.....	1,186
Corn starch ..... kilograms..	23,630	3,316
Hams	1,261	1,261
Lard	108,877	33,731
Preserved fish	.....	62,069
Liquors	.....	11,038
Tobacco:		
Cigars	.....	3,132
Cigarettes	.....	825
Tobacco	.....	94,585
Textile fabrics, &c.:		
Sack cloth ..... kilograms..	95,566	29,246
Pack thread	.....	3,349
Casimeres	.....	460
Sewing thread	.....	14,888
Cordage	.....	17,233
Canvas ..... kilograms..	233,587	170,286
Wicking ..... do....	19,735	13,711
Clotheslines	.....	1,531
Cotton goods ..... kilograms..	120,116	92,909
Cotton goods ..... meters..	186,968	17,153
Hempen goods ..... kilograms..	75,630	30,642
Woolen goods	.....	247
Mixed goods	.....	852
Cotton articles	.....	407
Hempen articles	.....	67,620
Linen articles	.....	65,702
Mixed articles	.....	470
Calicoes and chintz goods ..... kilograms..	82,928	90,625
Ready-made clothing	.....	7,460
Drugs, chemicals, paints, &c	.....	82,224
Fire-crackers	.....	37,863
Specifics for curing sheep scab	.....	68,167
Kerosene ..... kilograms..	3,696,669	341,891
Coal	2,501,343	25,014
Perfumery	.....	7,913
Musical preparations	.....	68,167
Lumber, &c.:		
Pine ..... square meter..	7,459,515	3,305,477
Walnut	30,141	38,278
Other kinds	.....	109,964
Trunks	.....	3,867
Carriages	.....	8,334
Musical instruments	.....	1,100
Furniture	.....	129,792
Pianos	.....	1,730
Other wooden articles	.....	44,709
Paper, &c.:		
Printing paper ..... kilograms..	961	255
Wall paper	5,525	2,977
Wrapping paper	1,384	494
Sand paper	4,319	11,285
Other paper	.....	2,838
Blank books	.....	5,996
Printed books	.....	5,839
Other printed matter	.....	1,410
Manufactures of leather	.....	6,668
Manufactures of iron:		
Arms	.....	9,965
Needles	.....	516
Wire ..... kilograms..	54,540	8,143
Kitchen utensils	.....	43,418
Nails	87,394	15,270
Chains	.....	472
Iron pipes	.....	2,501
Cooking stoves	.....	2,071
Knives and forks	.....	3,865
Iron utensils	.....	78,642
Tools	.....	61,209
Agricultural implements:		
Plows ..... number..	7,307	62,566
Reapers and mowers ..... do....	2,319	389,736
Thrashing-machines ..... do....	15	9,175
Spades, shovels, and picks	.....	63,366
Other farming implements	.....	77,139
Pumps	.....	9,020

Imports from the United States—Continued.

Articles.	Quantity.	Official value.
Sewing-machines.....number..	3,941	$71,785
Presses.....	4	980
Machinery and motors.....	.....	70,057
Materials for railways.....	.....	321,962
Materials for tramways.....	.....	28,455
Materials for public works.....	.....	193,896
Jewelry, watches, clocks, &c.....	.....	82,871
Lamps and glassware, &c.....	.....	86,596
Blacking.....	.....	18,869
Tar.....kilograms..	1,750,782	84,541
Various other articles.....	.....	40,229
Total.....	.....	7,006,719

Exports to the United States.

Articles.	Quantity.	Official value.
Canary seeds.....kilograms..	149,189	$8,945
Bones and bone ash.....do....	8,020,905	176,460
Hair.....do....	743,285	371,642
Goat-skins.....do....	1,541,006	955,428
Sheep-skins.....do....	165,074	82,625
Nutria-skins.....do....	198,148	118,828
Various skins.....	.....	2,205
Ox hides:		
Dry.....number..	483,390	2,360,145
Salted.....do....	4,353	23,942
Hide-cuttings.....	.....	28,523
Wool.....kilograms..	4,239,699	1,187,115
Linseed.....do....	6,278,666	251,147
Other articles.....	.....	18,901
Total.....	.....	5,563,841

THE IMPORT TRADE FROM THE UNITED STATES.

In regard to our import trade with the Argentine Republic it may be said generally that it presents no new features. It consists in great part, as heretofore, of raw materials and crude articles, a part at least of which come from the United States simply because they cannot be procured elsewhere. The following table shows a comparison of the imports of leading articles for the last four years:

Articles.	1882.	1883.	1884.	1885.
Turpentine.....	$29,012	$65,350	$34,430	$25,152
Alcohol and other liquors.....	68,348	55,800	97,271	11,088
Starch.....	83,803	53,959	49,448	45,438
Agricultural implements, &c.....	528,046	157,248	136,530	611,002
Lamps and gas fixtures.....	46,200	47,966	66,159	86,596
Lumber of all kinds.....	2,019,216	1,741,238	2,870,148	3,453,719
Furniture.....	176,847	77,258	92,517	129,792
Cotton goods.....	125,009	147,578	178,178	200,697
Hardware, &c.....	141,623	171,501	280,694	226,073
Lard.....	26,619	23,597	40,326	33,731
Kerosene.....	363,139	564,148	866,741	341,891
Railway machinery, &c.....	273,376	274,385	834,168	392,019
Drugs, &c.....	33,280	64,178	62,355	82,224
Tobacco.....	120,339	144,574	208,420	98,542
Hempen and woolen fabrics, &c.....	129,958	128,588	189,138	165,584

Our imports cannot be expected to assume very much greater importance than they at present exhibit until we possess better facilities for doing business and a more intimate intercommunication by means of steam. I have, however, so often referred to the subject that it is hardly necessary for me at the present time to dwell on the importance of regular steamship communication, of the establishment of more direct banking relations with the Argentine Republic, and of the opening of business houses here which have connections with our own manufacturing centers. On the latter point I may, however, repeat that the occasional movements which have been made to obtain orders from this and other South American countries for our industrial products by jobbers or wholesale dealers, or even third parties, who receive a commission from the dealers for effecting sales, will not succeed. This might do were the field a new one, but it is already occupied by other manufacturing nations. The competition, therefore, is so close and exacting that it is absolutely necessary, in order even to obtain any proportion of the trade, that our manufacturers should put their goods down here encumbered as little as possible with charges and profits of middle men. Some of our manufacturing establishments are beginning to understand this, and, now, instead of doing their business through brokers or commission men, they do it themselves. They find that what they heretofore paid for commissions is in itself a very fair profit on their goods. All our manufacturers who would succeed in placing their fabrics on this market will have to do likewise.

THE EXPORT TRADE TO THE UNITED STATES.

The figures of the exports from the Argentine Republic to the United States are the largest since our war. The following table is a comparison of the last three years of the most important articles:

Articles.	1883.	1884.	1885.
Ox and cow hides	$1,488,799	$2,462,244	$2,384,087
Wool	955,862	602,737	1,187,115
Linseed	30,515	96,051	251,147
Sheep-skins	1,156	272,957	82,625
Goat-skins	277,209	161,143	955,428

Ox and cow hides still continue to be the leading article of the export trade to the United States, though the wool shipments show considerable increase over previous figures.

WOOL.

In regard to the latter article, there seems to be a growing sentiment that a freer export of wool to the United States is the key which would open a large and profitable reciprocal commerce between ourselves and the Argentine Republic. There is no doubt that it would increase and make much more intimate the relations which exist between the two countries. So long ago as 1878, in a report to the Department of State, I said:

There are some features of our tariff which are regarded by the merchants of Buenos Ayres as a serious obstacle to the promotion of our trade with this country. Well-known American houses in this city complain of our high tariff on wool, and claim that before the present duties were imposed there was a more healthful interchange of commodities between the United States and the Argentine Republic; that up to the

time of our war the United States had a very considerable trade in cotton drillings, duck, and other lines of staple goods; and that this trade could be readily regained by our reducing our wool duties, thus stimulating an interchange of products and opening a larger field for our commerce. Of course, however, our trade relations with other countries is a matter for Congress to regulate.

And again, in my report for 1885, in referring to our limited trade with the Argentine Republic, I said:

The export trade to the United States fluctuates, year by year, according to the demand which our manufacturing establishments may have for such supplies, outside of our own country, and owing to the production of these articles which the United States is now able to throw upon the home market, it is not probable, unless there should be a reduction of our duties on wool, that our supplies of raw materials from the Argentine Republic will ever reach to very large figures. In regard to wool it is very evident that it can be produced much cheaper here than in the United States, but, since 1864, our tariff has quite precluded all shipments, except the coarse carpet wools from Cordoba. * * There is no doubt, however, even were the Argentine export duties on unwashed wool repealed, that it would greatly increase the amount of the shipments of that article to the United States. As it is, with an export duty here of 4 per cent. on the declared value, in addition to our own home tariff on foreign wool, it is impossible to ship it to our ports at paying rates.

ARGENTINE EXPORT DUTY ON WOOL.

This export duty on raw materials is a peculiarity of perhaps all the South American countries, and has been a feature of the Argentine tariff for a great many years. An effort was made last year to repeal it out of existence, on the ground that export duties are a great burden upon the industries of the country, but owing to the necessities of the Government the measure was abandoned, the Congress contenting itself with merely reducing the amount of the tax. That upon wool, which had previously been at 6 per cent., was marked down to 4 per cent. The official value, on which this duty has to be paid, for the present year, is at the rate of $24 per 100 kilograms, or 220 pounds; *i. e.*, about 11 cents per pound. I do not know the fine points of the wool trade, nor the price in the United States at which it would pay to ship clothing or combing wools, our tariff on these classes being 10 cents per pound, but it has occurred to me that perhaps the repeal of this export tax by the Argentine Republic might assist the situation. There is no doubt that our trade with the Argentine Republic would attain much greater proportions were there such modifications of existing tariffs, Argentine as well as American, as would allow wool to be profitably shipped to the United States.

OUR DISCRIMINATION AGAINST ARGENTINE WOOL.

Even, however, if the Argentine export duty on wool is not taken off, and our own tariff rate remains as it is, our Government should at least so adjust its valuations as not to discriminate against the wools of this country. It appears that at present there is an unintentional but a practical discrimination against Argentine wools and in favor of those from Australia and New Zealand, in this, that the former are much heavier in grease and dirt, and we make no allowance or reduction whatever for such excess. It appears that the amount of dirt and grease in the wools of the Argentine Republic reaches to more than 70 per cent., while the wools of Australia and New Zealand only have about 50 per cent. In other words, while the average yield of Argentine wool scoured is only 30 per cent., that of the other countries named is 50 per cent. The matter seems to be one which is deserving of the attention of our Government as an unjust discrimination against the Argentine Republic. If the mills of

the United States did not use foreign wools at all the case would be different. The discrimination would have no practical significance. But they do use foreign wools, and just such classes of foreign wools as the Argentine Republic produces, and, owing to the more intimate trade relations which we are striving to cultivate with this country, we should avoid even the appearance of favoring other nations to the detriment of the Argentine Republic.

On the subject of this discrimination against Argentine wools by the United States I append the following letter, written by George F. Brown, esq., agent in New York of the American house of Samuel D. Hale & Co., doing business in Buenos Ayres, to the Rev. Dr. John F. Thompson, pastor of the American Methodist Episcopal Church of this city:

[From Buenos Ayres Standard.]

NEW YORK, *June* 12, 1886.

Rev. JOHN F. THOMPSON, D. D., *Buenos Ayres:*

MY DEAR SIR: As during your recent visit to the United States you interested yourself to some extent in the working of our present tariff on clothing wools, under which their importation from the Argentine Republic has been practically abandoned, I follow your suggestion and address you a few lines upon the subject.

The duty on clothing and combing wools costing not more than 30 cents per pound at place of growth is 10 cents per pound (for unwashed), regardless of condition or of their relative value to our manufacturers.

This is a serious inconsistency and is a practical discrimination against Argentine wools, for the reason that they are much heavier in grease and dirt than the wools from Australia and New Zealand, and must continue to be so, owing to the nature and abundance of the grasses upon which the sheep feed and the dust and dirt they gather from constant exposure and generally fat condition.

As the actual value of wool to the manufacturer depends upon its quality in the cleaned or scoured state, and as it must be cleaned or scoured before it can be manufactured, it follows, in the application of a specific duty to wools in the grease, that the duties are heavier or lighter according to the quantity of grease and dirt that the wool contains. In other words, the duty on cleaned or scoured wool must be considered.

At present the Argentine wools would pay the same specific duty as those from Australia and New Zealand, say 10 cents per pound in the grease, but from their respective yield in scoured wool it is plain to be seen that the tax is much greater upon the former than upon the latter.

Assuming that the average yield of Buenos Ayres and Santa Fé wool is 32 pounds in 100—and we are safe in saying it is no greater—it follows that the duty per scoured pound would be 31¼ cents.

Among dealers and manufacturers 40 per cent. is considered as yield of the general run of Australian and New Zealand clips; and such at 10 cents per pound would be equivalent to 24⅞ cents per scoured pound, or 6⅞ cents per pound less than on Buenos Ayres, &c.

This applies to the average or general run of the respective clips. But while it may be admitted that selections can be made from Argentine wools that may yield 36 or possibly 38 per cent. (though in limited quantities), yet it is a fact that very little of our large importations from Australia, &c., yield less than 48 per cent., and some as high as 53. To make comparison, therefore, it is proper to consider what we do receive from Australia, &c., and the best we might receive from Buenos Ayres In this manner, taking the cases respectively, 43 per cent. and 38 per cent., we find the duty per scoured pound to be 20⅞ cents for Australian, &c., and 26¼ for Buenos Ayres, a difference of 5¼ cents.

This difference alone would amount to prohibition, but there is the additional fact that owing to the presence of more or less burs and seeds in all the Buenos Ayres wool, it cannot in its scoured state command the same price as Australian, and although admitted to be when ready for manufacture the best fine clothing wool in the world, for this defect a difference of about 12½ per cent. is demanded. To make this plain to you I will put it as follows: A manufacturer wants wool and will buy on a basis of 80 cents for scoured. He would pay 36 cents for Australian, &c., yielding 45 per cent., or 40 cents for 50 per cent. yield. Or, he might buy Buenos Ayres on basis of 70 cents and pay 23⅞ cents for 34 per cent. yield, or 25¼ cents for 36 per cent. yield; it would be all the same to him in most cases. But the duty on these different importations would be respectively 22⅝, 20, 29⅛, 27⅛ cents.

Now, it may be asked why our manufacturers acquiesced in a tariff that debars them from using the Buenos Ayres wool, when for the production of certain fabrics foreign wool is a necessity. To this I can only reply, after reading the pamphlet recently addressed to the Secretary of the Treasury by the National Association of Wool Manufacturers, in response to his circular asking for information bearing upon the question of possible revision of the tariff, that having accepted the revision made in 1883 and adjusted their business to it, based upon the expectation of its continuance, they are opposed to any changes as tending to disturb the relation of business.

They make no allusion to the discrimination against Argentine wools, and the only reference made to them in the body of their address is as follows:

"To these considerations it should be added that the high specific duty on clothing wools, a duty irrespective of the cost, practically excludes the cheap and abundant clothing wools of South America, and by freeing them from our competition for their purchase makes them much cheaper than they would otherwise be to the manufacturers of France, Belgium, and Germany, who work them up into cloths and stuffs by the cheapest labor in Europe."

Still we are not to suppose that our manufacturers would not use the Argentine wools if they could be admitted under a fair rate of duty; and on the other hand it is only reasonable to infer that they would do so, as they have done largely in years past.

Whether the wools are wanted or not the fact remains that they are unjustly discriminated against. This was admitted (unofficially) by those of the Tariff Commission in 1882, who had the matter of wool in consideration, but there seemed to be no practical remedy, except under an "ad valorem" tariff, and to this they were opposed as opening the way to fraud by undervalued invoices. But it does seem as though some means might be devised to put this matter straight and avoid the perpetuation of such injustice towards a friendly Republic. Possibly a formal protest on the part of the Argentine Government, through their representative at Washington, might bring the matter squarely before our legislators; but until something of this kind is done there seems little prospect of a remedy, as the wool-growing industry of this country has assumed immense proportions, and all interested in it are so anxious for "protection" that their united influence would oppose any movement tending to facilitate further importations of the foreign article.

I remain, dear sir, yours truly,

GEORGE F. BROWN.

THE PIONEER OF THE ARGENTINE-AMERICAN TRADE.

In closing this review of the commerce of the United States with the Argentine Republic, it seems appropriate that I should mention here one of the pioneers in that trade. I refer to Samuel B. Hale, esq., who was born in Groton, Mass, I believe, in the year 1803, and who, in 1833, under the auspices of the Lawrences, of Boston, had the nerve and the energy to try his fortunes in the River Plate. With a clear-headed sagacity and business tact which have characterized him through life he saw and at once took advantage of the opportunity which offered of conducting here a reciprocal trade with the United States. In 1835 he opened the American house of Samuel B. Hale & Co., which, through all the changes, revolutionary, political, financial, and commercial, which the Argentine Republic has known, has kept on the even tenor of its way, extending and prospering, until to-day it has come to be one of the institutions of the country, one of the landmarks of a past age. At one time it managed and controlled nearly all the commerce between the United States and the Argentine Republic, and conducted the immense wool trade which, before our war, found its market at Boston. The house is associated with all that is honest and honorable in business, and to-day possesses a prestige and good name which places it in the first rank of the commercial houses of the world. There have been a few changes in the *personnel* of the firm, but it has always retained its original name. To-day those associated with Mr. Hale are his son-in-law, John F. Pearson, esq., also a native of Massachusetts, who came into the partnership in 1858; Mr. Nicholas Bonwer, the son-in-law of Mr. Pearson, and Mr. C. H. Sanford, of New Jersey. Almost retiring

from commercial business, the house has for several years devoted itself to financial affairs, and has placed in Europe a number of the most important loans of this and other provinces of the Argentine Republic. The credit of the house is fortified by the possession of a number of the most extensive cattle and sheep estancias in the country. Mr. Hale is now an old man, quite eighty-four years of age, entirely retired from active business. In a happy, cheerful, old age, surrounded by children, grand-children, and great-grand-children, he lives at a beautiful country seat, just outside of the city, overlooking the Rio la Plate, and not only dispenses a generous hospitality to all Americans coming to the Argentine Republic, but to the poor, the shipwrecked, and the unfortunate he opens his purse-strings with a liberality and benevolence which ask no questions. The shadows of a busy and well-spent life are now gathering around him. His work is almost done, but with it will long be associated the memory of a thousand acts of kindness to his fellow-men and integrity which was never questioned.

ARGENTINE TARIFF FOR 1887.

The Argentine Congress, just adjourned, made some changes in the customs law of the country for 1887. I give a translation of the new enactment below:

IMPORT DUTIES.

ART. I. All foreign merchandise imported for consumption shall pay a duty of 25 per cent. on its valuation in deposit except as follows:

(1) Tobacco, which shall pay a duty of 55 per cent.

(2) Fire-arms and munitions, powder, perfumery, cigars of all kinds, and snuff, which shall pay a duty of 50 per cent.

(3) Ready-made clothing and confections, hats and caps, boots and shoes, dress ornaments, harness, carriages, furniture, matches other than wax, fire-crackers, Yerba maté and objects of art, which shall pay a duty of 45 per cent.

(4) Iron not galvanized, in plates, bars, or sheets, white pine and spruce unworked, common salt, all kinds of writing and printing paper, which shall pay a duty 10 per cent.

(5) Canvas and sack cloth, jewelry, gold and silver worked, sewing and embroidery silk, all instruments or implements with handles or ornaments of silver or gold, when these increase its value one-third part; plows, staves, wooden or iron casks, iron hoops, printed books, with pasteboard covers and without gilt ornamentation; printing presses, and all materials for printing except types; lithographic presses, machinery of all kinds for agricultural or industrial purposes, steam-engines and detached pieces of machinery, thread and wire on spools for binding, sulphuric acid and sulphate of lime, which shall pay a duty of 5 per cent.

(6) Precious stones, which shall pay a duty of 2 per cent.

(7) The following specific duties, to wit:

Wheat, for each 100 kilograms	$1 65
Starch, for each kilogram	05
Coffee, for each kilogram	08
Macaroni, for each kilogram	07
Crackers and biscuits, for each kilogram	09
Corn meal, for each kilogram	04
Flour, for each kilogram	04
Hominy, for each kilogram	04
Tea, for each kilogram	30
Sugar, for each kilogram	07
Common wines in casks, per liter	06
Fine wines in casks, per liter	22
Wine, bottled, for each bottle of one liter	22
Beer and cider, for each bottle, per liter	15
Alcohol in casks, not exceeding 30°, per liter	15
Liquors in casks, not exceeding 25°, per liter	15
Alcohols, bottled, not exceeding 30°, per liter	25
Liquors, bottled, not exceeding 25°, per liter	25

Those of greater alcoholic strength shall pay in proportion.

Kerosene, per liter	$0 05
Stearine or paraffine candles, per kilogram	15
Stearine, per kilogram	12
Playing cards, per gross	10 00
Wax matches, per kilogram	50

All articles of weight which have two or more coverings shall pay the specific duty on the immediate covering.

ART. II. The following articles shall be imported free of duty, to wit: Vessels and machinery for steam vessels; stone coal; wire, for fencing and for telegraphs; blood stock and live cattle; fresh fish and fresh fruit; furniture and tools of immigrants; gold and silver, coined, in grain, bars, or dust; live plants; railway and tramway materials; locomotives; car-wheels; iron piping, ungalvanized, for gas or water, of at least 75 millimeters diameter; quicksilver; cask frames of more than 2 kilograms; special mining powder and drilling machines; church ornaments, or for purposes of religious worship; books and stationery at the request of boards of education; specifics for curing scab in sheep; all articles excepted by special laws of Congress.

EXPORT DUTIES.

ART. III. All kinds of produce or manufactures are free of any export duty, with the exception of the following, which shall pay as follows:

Four per cent.—Washed and unwashed wool; skins of wild animals; sheep-skins, washed or unwashed; ostrich feathers.

Three per cent.—Animal oil, horns and horn-piths, bone-ash, hair, hide-cuttings, grease and tallow, bones, hides, and skins not otherwise mentioned.

I would state that by a supplemental law there is a duty of 1 per cent. additional to the rates above specified on all articles of importation. The duties are liquidated according to a tariff of official valuations formed on the basis of the actual value of the imports in deposit, and on the prices in the market ready for export, on all articles to be exported.

THE PRESENT OUTLOOK OF TRADE.

For the reasons heretofore given by me the general trade of the Argentine Republic during the year just closing has not been a satisfactory or a profitable one. The violent fluctuations of gold have rendered it impossible for importing houses to be sure of what they were doing in regard to their time sales. Transactions of this character, which seemed to promise a fair return, have ended in ultimate losses. By marking up their goods to such currency rates as left but little to be feared from the daily changes in the premium on gold, many houses, however, have been able to go through the year without much anxiety; but no trade can be a sure and safe one which must be conducted in a fluctuating currency. And, then, the tendency to overtrading still continues to an extent which cannot fail still further to demoralize the financial status of the country. The public deposits are filled to overflowing with merchandise, awaiting a chance to find a market at almost any price. The custom-house returns for the year 1886, made up to the 1st of December, show that at the port of Buenos Ayres there have been imported nearly fifteen millions of dollars more than the year previous, while the exports were nearly four millions of dollars less. The following are the figures:

For eleven months.	Imports.	Exports.
1886	$83, 439, 186	$40, 880, 457
1885	67, 267, 343	53, 744, 193

A foreign trade which thus, year after year, continues to show an increasing balance of trade against the country, a very large propor-

tion of the imports not being for reproductive industries, cannot fail to tell upon its financial condition and bring on commercial depression, if not convulsion. In such a state of affairs no matter how much gold the Government, by means of foreign loans, may bring into the country, it is sure at once to find its way out of it again to pay its debts.

REVENUES AND EXPENDITURES OF THE ARGENTINE REPUBLIC.

The revenues for the Argentine Republic for the year 1885 amounted from all sources to $36,416,132, being less by $820,688 than those of the preceding year. As a matter of some financial interest I give below a table showing the annual revenues of the nation for the last sixteen years:

Year.	Amount.	Year.	Amount.
1870	$15,827,709	1878	$19,066,999
1871	13,104,920	1879	21,660,863
1872	18,778,363	1880	20,247,487
1873	20,965,585	1881	22,057,500
1874	17,077,817	1882	26,065,105
1875	17,779,720	1883	30,713,348
1876	14,036,424	1884	37,236,820
1877	15,318,264	1885	36,416,132

The falling off in the last year is explained by the reduction in the duties on exports. It will be observed that the revenue has doubled in the last ten years, thus corresponding to the increase in the foreign commerce of the nation.

RECEIPTS FOR 1885.

The following table shows the sources from which the revenue of 1885 was derived:

Imports	$23,205,975
Exports	2,375,815
Warehousing	673,668
Stamped paper and business licenses	2,736,341
Post-office	586,494
National telegraphs	243,958
Light-houses	109,232
National railways	2,751,927
Various sources	2,489,930
Sundries	1,242,792
Total	36,416,132

Being $4,078,052 below the estimated receipts.

THE BUDGET FOR 1885.

The appropriations made by Congress for the support of the public service for the year 1885 were $43,080,161, against $34,053,484 in 1884; $31,224,748 in 1883; and $28,145,066 in 1882. The budget was distributed as follows:

Department of the interior	$10,330,358
Department of foreign affairs	392,256
Department of finance	16,164,362
Department of justice, education, and religion	5,244,512
Department of war	7,435,403
Department of the navy	3,513,870
Total	43,080,761

So that between the budget and the revenues with which to meet it there was a deficiency of $6,674,629, which has had to be met by the usual recourse—the issue of treasury notes.

PRESENT DEBT OF THE NATION.

The minister of finance in his last report to Congress states that on the 31st of December, 1885, the bonded debt of the Argentine Republic was as follows:

Internal debt, bonded	$47,137,764
Foreign loans	71,194,032
Total bonded debt	118,337,796
Floating debt outstanding at that time	25,901,826
Total liabilities December 31, 1885	144,239,622

The total debt of the Argentine Republic in 1881 was $82,017,291; in 1882, $102,026,627; in 1883, $106,477,311; in 1884, $122,603,098; and in 1885, $144,239,622, a rate of progression which it would seem cannot be continued with a proper regard for the national credit. However, the minister of finance takes a hopeful view of the situation. He says:

The wind-up of the financial year is much more satisfactory than could have been expected, for although a few unfavorable symptoms remain, they are disappearing by degrees as the country advances in recovery. The suspension of specie payments in January, 1885, caused some disorder in commercial operations at the same time that the budget was out of equilibrium, owing to the costly public works then in progress. To add to our misfortune there was an alarming state of affairs in Europe which threatened to result in war between two great powers. All these things affected our market, driving up gold to an unprecedented premium, and as we could not avert the evils we did all we could to minimize them.

As a primary measure to mitigate the crisis last year the Government cut down the expenditures by three millions in order to avert a deficit. Meanwhile, an extra duty of 15 per cent. paper was levied on imports to meet the loss in exchange on account of the suspension of specie payments, and as the gold premium was much higher the merchants actually paid less duties on their goods than if the duties had been liquidated in gold. We furthermore abolished the decree which required the banks to keep their reserves in gold. We reduced the estimates on the public works. We consolidated the floating debt. We imported large sums of gold on account of foreign loans to strengthen the specie reserve of the National Bank, which had made advances to the Government to enable it to carry on the public works and made such for the budget of 1886 as to show a probable surplus of revenue over all expenditures. It will be perceived, however, that "special credits" upset all our calculations in regard to a financial equilibrium, leaving us in the end with a deficit of $2,000,000. This system indulged in by Congress of voting moneys outside of the general budget is enough to throw the finances of any country into disorder. We can never make our national credit strong and place it above all question so long as we are afflicted with deficits at the close of each year and an outstanding floating debt which we cannot meet. Congress should once for all establish the rule of making no appropriations without providing the ways and means of meeting them. Our floating debt has now reached to about $26,000,000. Our finances would be much easier and our credit far better if we could get rid of floating debts and make both ends of the budget even.

It must be confessed that the finance minister does not take a very rose-colored view of the financial situation. The balance of the forty-two million loan, negotiated by Dr. Pellegrini last year, was long since paid over to the Government at the rate of 81 cents to the dollar, a rate which can hardly be understood or explained, when we consider the punctuality with which the Argentine Republic has always met the service of her public debt. In view, however, of the obligations of the Government, now outstanding in the form of floating indebtedness, it seems imminent that another loan will be required to carry the country through its financial difficulties. There are, however, negotiations now

pending for the sale of the national railways to private parties; and if the Government can thus get quit of a business in which it ought never to have embarked (especially as private capital was ready and anxious to assume the work), at such figures as will save it from too great loss on its investments, it would be the part of wisdom for it to do so. The Government will thus be able to avoid further loans and further financial complications. Last year the national railways produced $1,300,000 over their expenses, or only about 3½ per cent. on the capital invested in them, for the loan of which the Government is paying 6 per cent.

SERVICE OF THE PUBLIC DEBT.

In the year 1885, of the total revenues of the nation, amounting to $36,416,132, the sum of $14,030,446, or nearly 40 per cent., was required to meet the interest on the bonded debt. For the present year I have not the estimated figures, but they will run to over $16,000,000, the new loan of $20,000,000 alone calling for $1,400,000 additional for interest and amortization; so that the service of the public debt is getting to be a burden which will soon require one-half of the public revenues to meet.

THE BUDGET FOR 1886.

The budget for the present year, 1886, based upon a large probable increase in the revenue, makes the following appropriations:

Ministry of the army and navy	$9,691,000
Ministry of finance	17,126,000
Ministry of the interior	8,243,000
Ministry of foreign affairs	436,000
Ministry of justice, worship, and schools	5,292,000
Total	40,788,000

The receipts of the Government for the half-year ending June 30, 1886, were $22,820,000, and thus the total revenue of the year it was then thought would reach fully $46,000,000, but during the last two or three months there has been a considerable falling off in custom-house business, and it is doubtful now if the revenue will reach above $40,000,000; thus, when we consider the large amount of supplementary credits, leaving another deficiency to be provided for.

APPROPRIATIONS FOR 1887.

The Congress which has just adjourned, estimating the receipts for 1887 at $43,966,360, has appropriated the sum of about $47,377,000 for the ordinary expenses of the Government. Beyond this, however, according to the figures published in the *Nacion* paper of this city, it has made provision for public works, public edifices, bridges, canals, &c., to the amount of $11,915,836 and ordered a loan of $12,000,000 to pay a balance due to the National Bank for advances, the total amount of the appropriation for 1887 amounting to $68,978,161. And to the general account is still to be added the sum of $4,459,500, being the amount of Government guarantees on new railway charters, which Congress has just granted to various private companies.

As I have already quoted from the last report of the minister of finance, "the system indulged in by Congress of voting moneys outside of the general budget is enough to throw the finances of any country into disorder." I trust, however, that the Argentine Republic will be able to make all necessary provision for the obligations it has thus been crowding on itself.

PROGRAMME OF THE NEW PRESIDENT.

Dr. Celman, the new President of the Republic, seems to appreciate the situation, and in the cordial good feeling which is expressed for his administration, and in the practical common sense which is believed to characterize his statesmanship, great hopes are entertained that he will exercise a conservative influence in the Government, insisting that Congress shall more carefully keep its expenditures of the public money within the revenues of the nation. In the programme, which, in his inaugural address, he marked out for himself, he says:

I shall direct all my efforts to the improvement of the financial situation of the nation, whose problem has not yet been solved. In her elements of labor, activity, and production, the Republic is working a wonderful change. She no longer devotes all her attention and energies to cattle and sheep breeding, but now exhibits an abiding interest in the agricultural industry, cultivating the sugar-cane and the vine, and growing increasing quantities of wheat and other cereals. In extending the protecting arm of the Government over all these and other industries, it will be my duty to foster, encourage, and facilitate their development by extending railway communication to the farthest frontiers; by cementing the kindly feelings which link us to other nations; by removing all obstacles to commerce and navigation; by building ports and piers to meet the exigencies of our home and foreign trade, and by ever deeming it my sacred duty to meet all obligations contracted by the Government at home and abroad. And the nation can fulfill all these duties, without either effort or sacrifice, by the exercise of a prudent economy. To this end, however, we must restrict the use of the public credit. We must stop building railways ourselves and let others build them for us. We must consolidate the public debt, home as well as foreign, thus effecting a great saving in its service. Thus the credit of the nation will be raised to the level to which a country that religiously meets all its obligations has a right to aspire.

Devoting his energies to the carrying out of these propositions, Dr. Celman's administration cannot fail to be a success.

THE YEAR CLOSES WITH A CHOLERA PANIC.

While preparing these last pages, in the fear that the Argentine Republic, in view of its public debts and private overtrading, was carrying a heavier burden than prudence would dictate; in the hope that there would be some satisfactory solution of the financial confusion in which the country seems to be involved, I am pained to announce to the Department of State that cholera, that dreadful scourge of the nations, which ever leaves wreck and ruin behind it, has appeared in this port and throughout the various centers of population in the interior. Thus far it has exhibited no great development; but even so it has created a panic all over the Republic. Men are running from their business; families are escaping from their homes. In a moment, as it were, from the high hope and determined energy which characterized the appearance of this city, a shadow has closed over every department of industry. All foreign commerce is paralyzed; all domestic trade has stopped. The interior has put on quarantine against Buenos Ayres, and Buenos Ayres against the interior. The railways have been compelled to suspend the running of trains by boards of public health, and the fleet of steamers, which ply upon the upper rivers, are required to lie idle in port. A sort of terror, senseless and unmanly, seems to have taken possession of public officials. We cannot communicate with either Montevideo or Rio Janeiro by letter, and I suppose to-day all the ports of the world are closed against the Argentine Republic. In this unfortunate state of affairs I close my report.

E. L. BAKER,
Consul.

CONSULATE OF THE UNITED STATES,
Buenos Ayres, December 17, 1886.

BRAZIL.

Annual report of Consul-General Armstrong.

FINANCIAL SITUATION.

Although Brazil is a country of vast natural resources, the present financial situation of the Empire is far from prosperous. Since 1870 not a single fiscal year has closed without a deficit. In the five years from July 1, 1870, to June 30, 1875, the receipts of the treasury amounted to 514,253,712,462 reis, averaging therefor 102,850,742,492 reis per annum, equivalent to $55,339,400 in United States currency with exchange at par.

The expenses during the same period amounted to 570,865,736,764 reis, averaging therefor 114,173,147,352 reis, or (at same rate of exchange) $61,653,499 per annum.

The deficit, then, averaged $6,314,099 a year, or over $30,000,000 in the five years.

In the following five years the receipts amounted to 537,447,569,402 reis, averaging 107,489,513,880 reis, or, in United States currency, $58,044,337 per annum.

The expenses during this period were 745,674,196,070 reis, or at the rate of 149,134,839,214 reis, or $80,532,913 per annum.

It will be seen from these figures that the annual deficit increased from some $6,000,000 in the first five years to over $20,000,000 in the second.

It was apparent to Brazilian statesmen that this state of affairs could not be allowed to continue, the country being undoubtedly in danger of bankruptcy. The first ministry organized after the electoral reform of 1881, under the direction of Senator Martinho Campos, declared on appearing before Parliament that, laying aside all party questions and invoking the assistance of its adversaries, it would devote itself especially to the solution of the financial problem.

This ministry, however, remained in office only a few months, and of course in so short a period it was impossible to make any progress in the solution of so difficult a question. Since then there have been no less than six changes of ministry. None of the cabinets organized in consequence of these changes have as yet been able to settle this important question. In the fiscal year ending June 30, 1884, the deficit amounted to 23,762,906,843 reis (or $12,631,970), and to 35,086,691,304 reis ($18,946,813) in the year ending June 30, 1885.

To overcome these deficits the Government has been obliged to contract loans, issue paper money, and increase the already burdensome taxes. The total amount of paper money issued between 1870 and the present date is 50,447,254,000 reis, or in United States currency $27,241,517. The whole amount now in circulation is 204,128,575,000 reis ($110,229,430), of which the sum of 187,343,725,000 was issued by the Government and 16,784,850,000 reis by the Bank of Brazil.

From 1870 to the present date the Government has issued 6 per cent. bonds, with the interest payable in currency, to the amount of 131,888,500,000 reis ($71,219,790), and 5 per cent. bonds to the amount of 50,000,000,000 reis ($27,000,000), with interest also payable in cur-

rency. Besides, it contracted four foreign loans to the aggregate amount of £19,791,330, with interest varying from 4½ to 5 per cent., and payable in gold, and one internal loan of 51,885,000,000 reis, with interest at 4½ per cent. payable in gold.

The present amount of indebtedness of the country is as follows, in United States currency:

Foreign debt	$114,670,950
Internal debt (funded)	238,575,888
Internal debt (floating)	133,371,409
Total	486,618,247

Besides the state is responsible for guaranteed interest on $123,120,601 invested in railroads, central sugar mills, &c. In the last budget the expense, with the national debt during the current year, is estimated at $25,410,392 and that with guaranteed interest at $4,442,025.

The national debt of Brazil is about eight times the average annual revenue of the country and about two and a half times the amount of its annual foreign trade.

Comparing Brazil with other countries and taking into consideration the circumstances that are peculiar to the former, we may estimate the production of the Empire at about double the amount of its average yearly foreign trade. If this estimate be correct the public expenses consume about 20 per cent. of the production. Thirty years, as is shown by a similar calculation, they consumed only 10 per cent. In other words, in the last thirty years public expenses have increased twice as fast as production. The revenue of the country is principally derived from the following sources: Import duties, export duties, receipts of Government railroads, tax on transfer of property, stamp tax, tax on industries and professions, tax on house-rent; from these are derived over 90 per cent. of the revenue of the country. The import duties alone contribute more than one-half of this revenue.

Nominally these duties vary from 10 to 40 per cent. The custom-house also collects on imports a certain percentage on the amount of these duties. This percentage, when first established, was only 5 per cent.; but it has been gradually elevated to meet the demands of the State for greater revenue. The last alteration took place in 1882, when the percentage was elevated from 50 to 60 per cent.

The emancipation law of 1885 established a surtax of 5 per cent. on all taxes, except export duties, for the purpose of augmenting the emancipation fund. The import duties, then, with the addition of the percentage of 60 per cent. and the surtax of 5 per cent. nominally vary from 16.8 to 67.2 per cent. In many instances, however, these duties are really much heavier, as is the case for example with kerosene oil, which, as I stated in a previous report, pays 86 per cent., although nominally the duty is only 30 per cent. There are some other goods which pay 150 per cent. of their value.

Besides, there are other custom-house charges on goods introduced into the country, such as those for handling and storage, and a tax called "*expediente*," of 5 per cent. on some classes of goods nominally free from duty. The custom-house storage charges, which were elevated in 1882, are now as follows: If the merchandise does not remain in the custom-house more than one month, it pays one-half of 1 per cent. on the amount of duties; if it remains two months, it pays 1½ per cent. per month; if it remains four months or upwards, it pays 2 per cent. per month. In computing the charges, a fraction of a month, even if it be but one day, is considered a full month. The export duties are

from 1 to 9 per cent. Exports pay, also, duties to the provincial governments, which, indeed, have even imposed import duties, thus raising questions which are still unsettled. In a future report I shall treat of provincial taxes, some of which seem very exorbitant, although the amount of revenue derived from them is not large. The aggregate annual revenue of Brazil amounts to only about $15,000,000 or $16,000,000. Coffee, which is the principal export from this port (its value being generally from 90 to 95 per cent. of that of the total exportation), pays 7 per cent. duty to the General Government and 4 per cent. to the provincial government at Rio de Janeiro.

The tax on the transfer of real estate is 6 per cent., of which half is paid by the buyer and half by the seller. The tax on house-rents is 12 per cent.

Besides the taxes which have already been mentioned, there are many others which, though providing little revenue, undoubtedly increased the burdens of the tax-payers. Among them are those on salaries of public employés, dividends, mining grants, patents, slaves, cattle, &c. As I have said, in consequence of the excess of public expenses over the revenue the tendency is to increase taxes, which may be seen from this incomplete enumeration are already very burdensome.

During the last session of Parliament the Government was authorized to impose a tax of about 20 cents a bushel on salt, a tax of 1 per cent. on debentures, and a tax of 50 reis (2½ cents) a liter (about 9 cents a gallon) on alcoholic liquors. It was also authorized to revise the tariff of the custom-house and the schedule of the stamp act. This revision is equivalent to additional taxation, for it is estimated that there will result therefrom an increase of about $2,400,000 in the products of the import duties, and about $100,000 in that of the stamp tax. The tax on alcoholic liquors will produce, it is thought, about $320,000, and that on salt about $270,000.

Many causes contribute to the present unsatisfactory state of Brazilian finances, but the most important among them, and that which affects them all in a greater or less degree, is the labor question, that difficult problem, which in some form has never ceased to perplex mankind, and which, even now, constantly threatens the very existence of all civilized nations.

It is the peculiar misfortune of Brazil, at the present moment, to be destroying the system of labor now in existence here, without having thus far been entirely able to replace it. It is true that there is a small current of immigration flowing into the country; that there is a limited supply of native free labor; that there are cheaper and better means of communication; that the use of improved and labor-saving machinery is gradually becoming more general, and that the slaves freed have been partly substituted by more efficient slaves who have recently grown to manhood. These and other favorable circumstances have certainly not failed to exercise a beneficial influence on the financial affairs of the country; still, as we have seen, they have not been able to maintain the normal rate of progress, and while public expenses have continued to grow, production has not increased in the same proportion.

The provinces which produce most are those of Rio de Janeiro, São Paulo, Minas Geraes, Pernambuco, Para, Bahia, and Rio Grande do Sul. Of these Para and São Paulo have steadily increased their production; Rio de Janeiro, Minas Geraes and Rio Grande do Sul have remained very nearly stationary, and in Pernambuco and Bahia production seems to be on the decline.

The labor of freedmen has not thus far proved very efficient. The free-born native population of the Empire is estimated at from eight to ten millions. Of the great mass of this population the legislative assembly of the province of Rio Janeiro, in a memorial addressed in 1880 to the General Assembly of the Empire, says as follows:

> The unfortunate inhabitants of our rural districts, without direction, without assistance, without habits of industry, without example, do not form part of the social communion, do not produce nor consume; they only derive from the soil insufficient sustenance, when they fail to obtain it by hunting and fishing on the lands of the planters.
>
> Thus they are considered a real nuisance, and it is necessary not to overlook the fact that the situation will become still more serious when into this mass of pariahs are merged the million and a half of slaves who at present constitute the working force on the large plantations.

Last year the same provincial assembly appointed a special committee to confer with the General Government on this important subject. In the preamble to the resolution to this effect, I find the following in reference to the class of population described in the document just quoted:

> They live in complete idleness, committing depredations on property, taking no part in the social communion, and neither producing nor consuming; they will become a disturbing element in society when the means of subsistence grow scarcer.

It is evident that much time must elapse before persons of this class can become useful citizens.

As to immigration, it unfortunately does not yet flow into the country on the grand scale which is so much desired. During the six years ending December 31, 1885, there arrived at this port only 134,142 immigrants, which is at the rate of 22,357 per annum. Last year there arrived here 21,065. Of these immigrants, probably one-half remain in the country, and perhaps 10 per cent. devote themselves to agricultural pursuits. It will be readily perceived that the supply of laborers from this source is entirely insufficient.

The present Government is endeavoring, with strong probability of success, to improve the financial state of the country. It succeeded last year in reducing from 6 to 5 per cent. the rate of interest on part of the internal funded debt. This represents a saving of nearly $1,800,000 per annum. It has before it, however, a much more difficult task. One of the worst consequences of the financial difficulties of a nation is that they lead the energy of the people into illegitimate pursuits. Overburdened and stationary production can offer but small rewards to useful labor. The consequence is, that a large number of persons are drawn away from such labor and induced to seek their fortune in occupations that, far from being beneficial to the community, are absolutely baneful. Lotteries spring up with lamentable rapidity, and in noxious abundance; the public departments are besieged by applicants for office, and immense pressure is used to obtain grants of subsidies and monopolies. As the state absorbs the greater part of the profits of production, it is natural that those who wish to share those profits should seek them where they are to be found, that is, in the possession of the state. All this, increasing the burdens of the producers, aggravates in its turn the very evils from which it results. It is, of course, extremely difficult to remedy this morbid state of affairs. It is not easy to get rid of abuses on which depend the interest and even the very means of subsistence of thousands of people. Any vigorous attempt on the part of the Government to promote reform and retrenchment would lead to such clamor and discontent that only a very strong ministry would be able

to avoid succumbing beneath their weight. It is not surprising then that there is a tendency to procrastinate, although every moment of delay increases the difficulties of the situation, and renders more and more gloomy the prospects of the country.

But, as I have already said, Brazil possesses vast natural resources. Let us hope that these, united to the patriotism of its people and the statesmanship of its politicians, will enable it to pass safely through the perils which now surround it. No one can desire this more earnestly than the people of the United States, who have every reason to wish for the progress and prosperity of Brazil.

STATE OF TRADE.

From what has already been said it can readily be surmised that the commercial development of Brazil, which at one time progressed favorably, is at present slow, and in some parts of the Empire absolutely stationary and even on the decline. It was hoped that the construction of railroads and central sugar-mills and generous aid to navigation would give a vigorous stimulus. Accordingly, in the last twenty years some 4,000 miles of railways have been constructed, many costly central sugar-mills have been erected, and the state now expends annually in subsidies to navigation nearly $1,500,000. The country has certainly done as much as was in its power to aid these improvements, and they have undoubtedly had much influence on trade. Although the freight rates are much too high, and although neither the railroads nor the sugar-mills, with some few exceptions, pay reasonable interest on the capital invested, and some of them do not even pay working expenses, yet they have in many ways contributed toward stimulating commercial transactions. On the other hand, however, they have helped to swell public expenses without being able to neutralize the evils caused by the undue increase of those expenses and by the present unsatisfactory state of the labor question.

Trade during the past year has in some respects been favored. Two loans made on very favorable terms by the Government enabled it to consolidate part of its floating debt and to keep out of the money market, where it has for many years exercised a most baneful influence by absorbing floating capital, which would otherwise have been employed in benefit of trade and industry.

Exchange, whose fluctuations are so injurious to trade, has this year been favorable, the value of the paper milreis having gradually risen from 17½*d*. to 22⅜*d*. This has enabled many importers to liquidate with a profit transactions in which they would have otherwise lost money, increasing at the same time the profits on transactions that were already advantageous.

It has also permitted a reduction in the nominal price of merchandise, thus tending to stimulate consumption. The rise in coffee has had a beneficial effect, which is, however, partly neutralized by the smallness of the crop. The province of São Paulo, however, produced a large crop, and has consequently derived great benefit from the rise in prices. It is thought that the growing coffee crop will be small, both in São Paulo and the provinces whose coffee is shipped from this port. As the means of obtaining information is very limited and unsatisfactory, it is very difficult, perhaps impossible, to make even an approximately correct estimate of the coffee crop. I will give, however, for what it is worth such information as I have been able to obtain.

During the first six months of the crop year of 1886–'87, the receipts in this market, under the stimulus of favorable prices, reached 2,227,287 bags. The estimates of the quantity still in the interior varies from 800,000 to 2,000,000 bags. The receipts in the Santos market during the same period were 1,529,055 bags, the quantity in the interior being estimated at from 700,000 to 1,000,000 bags. As to the Rio crop for 1887–'88, I have seen two estimates. According to one of these, it will not exceed 2,000,000 bags, and may not be over 1,500,000. According to the other, it will be between 2,500,000 and 2,750,000 bags.

The shipments of coffee from this port during the last five crop years were as follows:

Years.	Quantity.	Years.	Quantity.
	Bags.		*Bags.*
1881–'82	3, 926, 372	1885–'86	3, 795, 321
1882–'83	4, 556, 372		
1883–'84	3, 219, 516	Total	19, 772, 364
1884–'85	4, 274, 783	Average yearly	3, 954, 437

During the first six months of the crop year of 1886–'87 there were shipped 2,130,564 bags. The home consumption in this market is estimated at 10,000 bags per month. The Santos crop for 1887–'88 is estimated at from 1,000,000 to 1,500,000 bags.

The year closed with great stringency in the money market. This was due to various causes, of which the most important seem to be the following: Absorption of floating capital by newly-organized companies and by those already in existence; demand for money to move the crops in São Paulo and the northern provinces; unusually large remittances to foreign countries.

During the year thirty-two new companies, with an aggregate capital of over $25,000,000, were registered at the board of trade. Debentures and additional shares were issued by existing companies to the amount of about $15,000,000. If half the amount thus subscribed was paid up, the capital actually absorbed in this way was not less than $20,000,000. There is no complete record of the remittances made to the provinces and to foreign countries; the recorded sales of exchange on England, France, Germany, and Belgium alone amounted last year to nearly $105,000,000 against about $60,000,000 in 1885. It seems that many persons took advantage of the favorable position of exchange to make long-deferred remittances. On the whole, however, the year 1886 may be considered more than usually favorable, and were it not for the general causes which affect the financial and commercial situation of the country trade would have been very prosperous.

The total foreign and coast trade of Brazil now averages about $230,000,000 per annum. That of Rio de Janeiro amounts to about $100,000,000.

FOREIGN TRADE OF BRAZIL.

In the five years ending June 30, 1866, the official value of the foreign trade of this Empire averaged 255,035,080,000 reis per annum, which, at the present rate of exchange, is equivalent to about $115,000,000. In the following five years the average was 341,932,012,000 reis, or about $154,000,000. The increase, therefore, was nearly $40,000,000, or about 34 per cent. Since then the growth of this trade has been, from the

causes to which I have alluded, much slower. In the five years ending June 30, 1885, the average was 397,128,346,000 reis or less than $180,000,000. The increase in the last fifteen years does not amount to 15 per cent.

As is well known, the principal Brazilian export is coffee. In the year ending June 30, 1872, there were shipped from all parts of the Empire 4,059,739 bags of this product, and in that ending June 30, 1885, there were shipped 6,239,118 bags, of which 4,274,783 were exported from Rio de Janeiro. The increase in the exportation of coffee is chiefly due to the development of its cultivation in the province of São Paulo. Part of the São Paulo crop comes to Rio, but the greater part goes to Santos, which is becoming more and more important as a coffee market. During the year which has just closed there were shipped from Rio de Janeiro 3,580,965 bags of coffee, against 4,206,911 in 1885, and 3,897,113 in 1884. As will be seen, there was considerable decrease in the shipments in 1886. Those of 1887 will probably not be larger nor even so large, if we may accept as approximately correct the crop estimates to which I refer in another part of this report.

The prices varied during the year from 2,800 to 6,200 reis per 10 kilograms, against 2,930 to 6,000 reis in 1885, and 3,130 to 6,600 reis in 1884.

Owing to the more favorable rate of exchange the rise in coffee is greater than is apparent from the above statement, if this be taken into consideration. The extreme prices per bag are as follows:

1884	$7 70 to $14 24
1885	6 68 to 13 68
1886	7 56 to 16 74

The average prices of medium grades, per bag, are as follows:

1884	$11 14
1885	9 06
1886	12 50

The receipts were 3,506,215 bags, against 4,252,606 in 1885 and 3,617,453 in 1884. The year closed with a stock of 220,000 bags, against 387,000 in 1885 and 225,000 in 1884.

On the list of Brazilian exports sugar occupies the second place. The exportation fluctuates very much, as is shown by the following statement:

Annual average for the five years ending June 30.

	Tons.
1874	306,571
1882–'83	162,910
1883–'84	315,141
1884–'85	259,367

The sugar industry of the country is at present in a very precarious condition. In the Brazilian Senate last year a member of that body mentioned having received letters from Bahia stating that in that province sugar was selling at prices that did not pay for grinding the cane. In Pernambuco, which, like Bahia, is one of the principal sugar-producing provinces in the Empire, four central sugar-mills, recently established by an English company at a cost of over $300,000 each, were operated during the crop year of 1884–'85 at a dead loss, the receipts being only about $130,000 while the working expenses exceeded $200,000.

In view of the unremunerative price of sugar and the gloomy prospects of the planters, several agricultural and commercial associations which had met in the capital of the latter province decided on sending

a telegram to Parliament declaring that it was necessary to convoke a general convention of merchants and planters to deliberate on this question, to suspend the collection of export duties, and to obtain a reduction in freight rates as the only means of saving the agricultural interests of the province from total ruin. In the Chamber of Deputies Mr. Thomaz Coelho, who represents in that house the sixth district of the province of Rio de Janeiro, and who was at one time minister of agriculture, stated that it costs in Brazil 175 reis (8¾ cents) to make a kilogram of cane-sugar, nearly 4 cents per pound, while in Germany the same quantity of beet-sugar can be made for 130 reis, which is about 3 cents per pound. He suggested that the Government should endeavor to obtain from the United States a reduction in the duty on sugar, reducing in compensation that on kerosene and other American products.

Cotton formerly disputed with sugar the second place among Brazilian exports, and in the fiscal year of 1871–'72 there were exported from the Empire 53,589,838 kilograms of this product, equal to 261,762 bales of 450 pounds each. Recently the exportation has greatly diminished, as may be seen by the following statement of the quantity exported in the three years included between July 1, 1882, and June 30, 1885.

Years.	Kilograms.	Bales.
1882–'83	28,277,756=	138,700
1883–'84	26,565,257=	130,500
1884–'85	18,246,510=	89,400

A limited quantity is consumed in Brazilian factories, some of which, however, import thread from Europe.

The exportation of tobacco increases, but less rapidly than formerly. There were exported 4,609 tons in 1860–'61, 12,835 tons in 1871–'72, and 19,632 tons in 1884–'85.

The exportation of india-rubber constantly increases and constitutes the principal source of wealth of the provinces of Para and Amazonas. The high prices which prevailed between 1865 and 1883 gave a great stimulus to production, and the supply of labor for gathering the rubber has for some years been steadily increased by a considerable current of immigration into the Amazonian provinces from the neighboring province of Ceará.

Hides constitute an important export from this Empire, but the quantity does not increase, amounting to 47,267,000 pounds in 1883–'84 against 47,847,000 pounds in 1871–'72.

The six products which I have mentioned constitute over four-fifths of the total exportation of the Empire, and in 1884–'85 coffee alone represented over two-thirds of the total value of the exports.

The principal imports are cotton, woolen, linen, and silk fabrics, dried beef, wines, coal, machinery and tools, iron and steel, flour, paper goods, jewelry, oils, boots and shoes, butter, pine, salt fish, lard, drugs and chemicals.

Official value of the foreign trade of this port during the years 1885–'86.

Countries.	Exportation from Rio de Janeiro.	Importation into Rio de Janeiro.	Total.
Argentine Republic	$792,047 86	$2,474,826 07	$3,266,873 93
Austria	1,855,643 02	45,333 99	1,900,977 01
Belgium	645,234 64	2,396,750 17	3,041,984 81
Cape of Good Hope	533,615 68	341 26	533,956 94
Cape Verde Islands	.....	104,448 11	104,448 11
Channel	94,950 44	.....	94,950 44
Chili	32,994 24	45,476 24	78,770 48
France	3,073,728 84	5,337,795 57	8,411,524 41
Germany	4,388,167 64	4,306,549 96	8,694,717 60
Great Britain	2,378,907 72	17,874,508 60	20,253,416 32
Holland	.....	42,994 62	42,944 62
Indo-China	.....	556,673 71	556,673 71
Italy	489,433 40	362,847 42	852,280 82
Mediterranean	9,450 00	.....	9,450 00
New Britain	.....	246,365 08	246,365 08
New Zealand	162 00	52,723 88	52,885 88
Portugal	97,067 27	2,768,386 78	2,865,454 05
Russia	10,962 00	30,487 50	41,449 50
Sweden	1,615 95	93,728 12	95,044 07
United States	26,743,763 70	3,145,863 34	29,889,627 04
Uruguay	433,656 02	4,993,985 29	5,427,641 31
Other countries	29,756 89	173,977 35	203,734 24
Total	41,611,157 31	45,054,213 04	86,665,370 35

It must be remembered that the official value of the imports may vary widely from their real value. The official valuation of a given quantity of merchandise of any kind does not correspond to the market prices, and changes only whenever the tariff is revised. This results from considering the specific duties collected by the custom-house as a certain percentage of the respective value.

To make clearer what I have just stated I will give an illustration. As mentioned in my last annual report, the price of kerosene oil in first hands varied in this market in 1885 from $2.36 to $2.96 per case of ten gallons. Its value, then, before payment of the duty of $1.06 per case, is from $1.30 to $1.90. The duty, which is specific, is supposed to correspond to 30 per cent. of the value of the article, or, including the additional duty, 48 per cent. The official value, then, of a case of kerosene was $2.20, while the real value never exceeded $1.90, and was sometimes as low as $1.30.

The official valuation of exports, however, is more accurate, the same being obtained from a weekly appraisement made of a given quantity of each article.

The following is a statement of the quantity and official value of some of the principal articles imported through the Rio de Janeiro custom-house in the year 1885–'86:

Boots and shoes.—993,079 pairs; official value, $750,345.

Butter.—Weight, 2,361,950 pounds; official value, $563,647. The greater part comes from France.

Coal.—Weight, 242,828 tons; official value, $2,015,523. About two-thirds of this comes from England.

Codfish.—Weight, 9,907,625 pounds; official value, $378,543.

Cotton fabrics.—Weight, 16,817,785 pounds; official value, $10,077,656. The value of these goods, of which about three-fourths come from England, amounts to over 20 per cent. of the total importation of Rio de Janeiro.

Dried beef.—Weight, 74,687,989 pounds; official value, $3,055,416. This article, which, as may be seen, is largely consumed here, comes from the Argentine Republic and Uruguay, chiefly from the latter, and

constitutes about two-fifths of the importations from those two countries.

Flour.—425,763 barrels; official value, $1,705,181. The greater part comes from the United States.

Iron and steel.—Weight, 8,316 tons; official value, $2,015,523. About two-thirds come from England.

Kerosene oil.—2,514,670 gallons; official value, $626,262. This article comes exclusively from the United States.

Lard.—Weight, 2,416,260 pounds; official value, $296,541. This article comes from the United States. In some years, however, small quantities are imported from other countries.

The principal competitor of the American lard is the Brazilian article, which, since 1879, has caused a considerable decrease in the importation from the United States. To show the effect of this competition and the consequent expediency of freeing this and other American products from all unnecessary burdens, and offering them every facility for reaching the consumer at the lowest possible cost, I give the following statements of the importations since that year:

Years.	Quantity.	Years.	Quantity.
	Pounds.		*Pounds.*
1879–'80	5,043,251	1883–'84	1,850,228
1880–'81	3,256,721	1884–'85	2,915,367
1881–'82	2,701,865	1885–'86	2,416,260
1882–'83	1,763,462		

The following statement of the extreme quotations from 1879 to 1886, compared with the above statement of the quantities imported, shows how the demand is regulated by the rise and fall in prices:

Years.	Price per pound.	Years.	Price per pound.
	Cents.		*Cents.*
1879	13½ to 14½	1883	18½ to 22½
1880	12½ 16½	1884	17½ 20½
1881	15½ 21½	1885	14½ 18½
1882	16½ 25½	1886	14½ 16½

When American lard is cheap it is preferred to the Brazilian article, and also substitutes to a certain extent *toucinho*, or salt pork of this country, which is much used in seasoning food. The recorded receipts of Brazilian lard in this market during the year 1886 were 2,427,409 pounds, and those of *toucinho* 7,461,254 pounds.

Machinery and implements.—Official value, $1,605,735. This trade is susceptible of being largely increased.

Silk fabrics.—Weight, 120,650 pounds; official value, $705,722. These goods come chiefly from France.

Linen fabrics.—Weight, 8,890,152 pounds; official value, $1,420,978. Three-fifths of these goods come from England.

Woolen fabrics.—Weight, 3,500,735 pounds; official value, $3,034,676. About half of these goods come from England, and nearly all the rest from Germany, France, and Belgium.

Wines.—6,540,960 gallons; official value, $2,028,524. This article comes principally from Portugal, though a considerable quantity is also imported from France.

The value of the fifteen articles included in this statement exceeds $26,000,000, or nearly 60 per cent. of the total importation.

The principal exports during the same year were the following: Coffee, 3,637,066 bags, valued at $39,072,475; diamonds, 1,510, valued at $94,468; gold, $1,202,980; hides, 9,717,400 pounds, valued at $425,799; sugar, 4,372,804 pounds, valued at $147,911; tobacco, 3,838,243 pounds, valued at $436,099.

Between the official and commercial statistics of the exportation of coffee there is a difference of 158,255 bags.

TRADE BETWEEN BRAZIL AND THE UNITED STATES.

Twenty-five years ago the trade between the United States and Brazil amounted to less than $15,000,000 per annum; now it exceeds $50,000,000. The growth of this trade is due principally to the increase in the consumption of coffee in the United States. Although the transactions in other kinds of merchandise have not kept pace with the coffee trade, they have undoubtedly been influenced thereby to a certain extent; for, while shipments of American merchandise to Brazil amounted in value to only $3,000,000 in the year 1863–'64, they now exceed $7,000,000.

In the year 1885–'86 the import trade between the United States and this port alone amounted, according to the Brazilian official statistics, which I give in another part of this report, to over $3,000,000, *i. e.*, they were equal in value to the American merchandise imported into Brazil in the year 1863–'64. I have not been able to obtain complete statistics of importation of American merchandise into Rio de Janeiro during the calendar year which has just closed. The following, however, shows the quantity and prices of some of the imports from the United States during that period:

Butter.—Thirty-five kegs and 1,244 cases, against 20 kegs and 539 cases in 1885 and 125 kegs and 844 cases in 1884. The extreme quotations for assorted cans were from 28 to 36 cents per pound. As I have elsewhere stated, the butter received here comes chiefly from France. Of the 52,641 cases imported last year, 46,070 came from that country. The price of the best French butter varied from 52½ to 61½ cents per pound.

I repeat, what I said in my last annual report, that the quantity of American butter consumed here ought to be larger than it now is.

Flour.—Three hundred and seven thousand six hundred and twenty-five barrels, thus classified:

Baltimore	227,624
Richmond	44,875
Western Interior	35,126
Total	307,625

The extreme quotations were as follows:

	Per barrel.
Western Interior	$5.40 to $7.65
Baltimore	5.51 to 8.77
Richmond	6.30 to 8.77

There were also imported 70,101 barrels of flour from the River Plate, and 19,913 from other countries.

At present importations from the River Plate are impeded by quarantine regulations on account of the cholera which now rages in the Argentine Republic. As the Brazilians consume comparatively very little bread, the growth of the flour trade must necessarily be slow, unless the price can be greatly reduced or unless consumption should be stimulated by a large influx of bread-consuming immigrants. I may here add that a large current of immigration, which is certainly one of the principal necessities of Brazil, would in many ways be favorable to the development of trade between this country and the United States.

Kerosene.—Three hundred and eighteen thousand two hundred and fifty cases, of 10 gallons each. The quotations varied from $2.76 to $3.25 per case. The consumption of this article steadily increases, though last year, in comparison with 1885, there was a slight decrease.

Lard.—Fifty-two thousand six hundred and twenty-nine kegs and 49 cases against 64,185 kegs and 427 cases in 1885. Elsewhere I treat at some length of this article.

Pine.—Eleven million fifty-five thousand four hundred and ninety feet against 12,630,839 in 1885. Spruce and pitch pine are sold in this market by the dozen planks, while white pine is sold by the foot.

The quotations varied as follows: Pitch pine, $16.65 to $19.12 per dozen; spruce pine, $17.12 to $17.34 per dozen; white pine, 4½ to 5 cents per foot.

There were also imported 23,768 dozens of Swedish pine, which was sold at from $14.17 to $18.45 per dozen.

Owing to the stimulus given to building in this city by the street railways, facilitating communication with the suburbs, the consumption of pine greatly increased and the importation rose from 4,119,246 feet in 1870 to 16,838,730 in 1879. It now averages about 12,000,000 feet per annum.

Rosin.—Fifteen thousand two hundred and eighty-seven barrels against 7,728 in 1885. Quotations, from $2.47 to $5.17 per barrel.

Turpentine.—Five thousand six hundred and forty-one cases against 4,125 in 1885. Quotations, from 8½ to 11½ cents per pound.

Besides the seven articles enumerated, there are imported others whose price and quantity are not given in the statistics which I have been able to obtain. The following conjectural estimate of their value seems to be approximately correct: Cotton fabrics, $200,000; drugs and chemicals, $30,000; machinery and implements, $300,000; paper goods, $30,000; miscellaneous merchandise (embracing some fifty or sixty articles), $250,000. In view of these statistics the real value of American merchandise imported into Rio de Janeiro may, I think, be safely estimated at $4,000,000. This merchandise pays duties to the amount of about $1,000,000, which elevates its value in first hands to about $5,000,000. According to the records from this consulate-general the exports from Rio de Janeiro to the United States were in 1886 as follows:

Quantity and value of the exports from Rio de Janeiro to the United States for the four quarters of the year ended December 31, 1886.

[As taken from the records of the consulate-general.]

Articles.	Quarters ending—			
	Mar. 31.		June 30.	
	Quantity.	Value.	Quantity.	Value.
Coffee.....bags..	691,362	$96,435,912 17	363,552	$52,589,534 19
Hides:				
Dry.....number..	100	381 39	.....	.....
Wet.....do....	7,396	39,747 61	.....	.....
India rubber.....package..	1	52 75	.....	.....
Do.....cases..	.....	.....	3	89 30
Do.....bags..	.....	.....	.....	.....
Do.....barrels..	.....	.....	.....	.....
Do.....kilos..	.....	.....	.....	.....
Rosewood.....logs..	.....	.....	314	4,902 56
Sundries.....	.....	6,585 02	.....	3,898 91
Total.....	.....	6,482,678 94	.....	3,598,419 96
Total for preceding year.....	.....	7,512,208 76	.....	4,995,466 08
Increase.....	.....	.....	.....	.....
Decrease.....	.....	1,029,434 82	.....	1,397,046 12

Quantity and value of the exports from Rio de Janeiro, &c.—Continued.

Articles.	Quarters ending— Sept. 30. Quantity.	Sept. 30. Value.	Dec. 31. Quantity.	Dec. 31. Value.	Total for the year. Quantity.	Total for the year. Value.
Coffee.....bags..	510,873	$6,521,207 09	614,512	$8,721,102 78	2,180,299	$25,267,756 23
Hides:						
Dry.....number..	.....	.....	700	3,036 29	800	3,417 68
Wet.....do....	.....	.....	.....	.....	7,396	39,747 61
India-rubber.....package..	.....	.....	.....	.....	1	52 75
Do .....cases..	22	2,286 72	.....	.....	25	2,376 02
Do .....bags..	.....	.....	144	10,582 45	144	10,582 45
Do .....barrels..	.....	.....	4		4	
Do.....kilos..	.....	.....	500		500	
Rosewood .....logs..	403	9,142 52	29	1,490 16	746	15,535 24
Sundries.....	.....	154 09	.....	740 91	.....	11,373 93
Total.....	.....	6,532,790 42	.....	8,736,952 59	.....	25,351,841 91
Total for preceding year.....	.....	6,503,439 11	.....	7,797,657 08	.....	26,808,765 03
Increase.....	.....	29,351 31	.....	939,295 51	.....	.....
Decrease.....	.....	.....	.....	.....	.....	1,456,913 12

In the sundries mentioned in the foregoing table are included the following articles: Bones, bone-ash, hide cuttings, jars and horn piths, old iron rails, scrap iron, paving stones, sarsaparilla, tapioca, and wine. Of the coffee exported, 335,032 bags were shipped to Baltimore, 244,835 to New Orleans, 47,598 to Galveston, 5,000 to Charleston, 5,632 to Savannah, and the rest to New York.

The following table shows the number of American vessels engaged in the trade with Rio de Janeiro in the year 1886:

Navigation of the United States at the port of Rio de Janeiro for the calendar year 1886.

[As shown by the records of the consulate-general.]

Quarter ended—	Entered. Steamers. No.	Steamers. Tons.	Sailing vessels. No.	Sailing vessels. Tons.	Total tonnage.	Cleared. Steamers. No.	Steamers. Tons.	Sailing vessels. No.	Sailing vessels. Tons.	Total tonnage.
Mar. 31.....	3	5,758.08	16	7,717.66	13,476.64	4	7,678.76	20	9,297.24	16,976.00
June 30.....	3	5,861.56	16	8,452.02	14,218.58	3	5,861.56	19	10,589.74	16,451.30
Sept. 30.....	3	5,741.66	20	10,487.55	16,229.21	3	5,741.66	17	8,475.21	14,216.87
Dec. 31	4	8,727.02	30	15,105.36	23,832.38	4	8,727.02	26	12,251.35	20,978.37
Total.....	13	26,089.22	82	41,762.59	67,851.81	14	28,009.00	82	40,613.54	68,622.54
Total for 1885.....	14	22,806.44	90	47,885.99	70,692.43	15	24,707.99	84	42,381.51	67,089.41
Increase.....	....	3,282.78	....	6,123.40	.....	....	3,301.10	....	.....	1,533.12
Decrease	1	.....	8	.....	2,840.62	1	.....	2	1,767.97	.....

DEVELOPMENT OF COMMERCIAL RELATIONS BETWEEN BRAZIL AND THE UNITED STATES.

The necessity of finding outlets for our surplus products seems to be generally acknowledged. In regard to this subject the following remarks made before a subcommittee of the Senate Committee on For-

eign Relations by Mr. S. O. Thacher, late Commissioner from the United States to Central and South America, in my conception states the matter well, truly, and forcibly. He says:

The question before the committee is one whose magnitude and far-reaching importance cannot be too earnestly considered.

It brings into view questions affecting our own welfare as a nation, casting light upon the solution of a grave and ever urgent problem. The industrial outlook of our land is not one of entire sunshine. There are more laborers than there is work for them to do; where one man is discharged from almost any of the manual occupations there waits one to take his place.

The inflow of laborers from other lands to this is no more a great need. In every department of industrial life there is production beyond consumption. Labor is struggling to hold its position and is fearful of being displaced or of losing its present ground.

The products of farm, shop, and factory were never within the memory of this generation so low as they are now. On the whole, as never before, our future growth, peace, and tranquillity depend on finding more consumers for what we have to sell. * * * In vain do we turn our eyes to any other part of the world for a people who at once need and are willing to take from our farms, looms, forges, and wells of mineral oils that which we are able to produce and spare. The nations of Central and South America offer not alone the most alluring and most profitable markets whereby to relieve our excessive productions, but there is no other field.

* * * * * * *

The easy way and the only way out of the complications and disappointments that yearly are being intensified by the diminishing profitableness of all of our industrial enterprises is to seek that market which so cordially invites, and from which, with strange fatuity, we have for the last twenty-five years diverted our thoughts.

* * * * * * *

Peace, prosperity, and the manifold blessings of contented producing classes wait on the footsteps of any measure that shall insure to our laborers, to our farmers and manufacturers a fair chance in the markets of Central and South America. To-day they are nearly closed against them.

Of all American nations Brazil is undoubtedly, next to the United States, the most important, and is, therefore, the one with which we should most sedulously endeavor to develop commercial relations.

It is true, as I have taken some pains to show, that the present financial condition of the Empire is not encouraging, and that trade is necessarily affected thereby. But this does not alter the essential facts that, notwithstanding the financial embarrassment of the country, its foreign trade amounts to nearly $180,000,000 per annum; that it ships to us annually products to the amount of over $40,000,000, and that it will probably purchase American merchandise to the same amount if we succeed (and with proper effort and energy I feel sure we will), in convincing the Brazilian that we can sell to him on more favorable terms than the nations of Europe are now doing. It seems to me, then, that in view of the very large amount of Brazilian products exported to the United States, and the comparatively small amount sold by us to this Empire, we should make some positive and systematic effort to obtain a larger share of Brazil's import trade than we now possess, always bearing in mind in this matter that it is necessary that our efforts should be cautious as well as earnest, vigorous, and persistent.

The obstacles to a more rapid development of our commercial relations with Brazil are certainly formidable, but by such efforts they can, and no doubt will, be overcome, and, in my opinion, it is worth our while to make them. The European dealers and manufacturers have at present largely the control and possession of this market, and a thousand and one circumstances of which the outsider can form no adequate conception makes it extremely difficult to contend successfully with this influence.

It is, I believe, generally admitted that one of the principal and most essential requisites for the development of trade between the United

States and Brazil is rapid, frequent, punctual, and cheap steam communication. "Steamship lines," say (truthfully, as far as my observation extends) Commissioners Thacher and Curtis in their final report, "carrying goods and passengers at low rates from our ports are the talisman to the desired end. Without them efforts for increased trade are nearly all thrown away."

It is, therefore, in my judgment, not only expedient to render still more efficient the present line of steamers now running between New York and the principal ports of this Empire, but also to establish a line between those ports and New Orleans.

Fully impressed with this conviction, I have exerted myself to promote the realization of the idea. To this end, I have discussed the matter with some of the capitalists of this city, and was gratified to receive from them assurances of their willingness to co-operate.

While on a visit last year to the United States, with a view to interesting our people in this matter, and in the hope that it might lead to some definite and positive action on the subject, I visited Mobile and New Orleans, met and discussed this project with the chamber of commerce of the former city, and the Cotton and Produce Exchanges of the latter. Committees were appointed by each of these bodies to consider and report upon the matter, but, as yet, I am not advised as to what has been done. In my opinion the two lines are absolutely necessary for the full development of our commercial relations with this Empire, and need in no way conflict, but in many respects could and no doubt would be made beneficial to each other.

When the trade between Brazil and the United States shall have received the development of which it is susceptible, there will be no lack of freights to support both lines. In the mean time, what is extremly desirable is to relieve this trade of all unnecessary burdens.

Without disputing the highly favored position of New York as our great commercial metropolis, it seems to me undeniable that New Orleans is much better adapted to serving as an entrepôt for the interchange of many of the products of Brazil and the Western and Southern States. There is no good reason, for example, why coffee should reach the consumer in the Mississippi Valley burdened with the expense of passing through New York, nor is there just cause for subjecting to a similar burden the Western flour and lard intended for the consumer in Brazil. If this trade can be relieved of its present burdens, the profits of the producer and the purchasing power of the consumer will be proportionately increased. Trade will thereby receive a stimulus which cannot fail to be beneficial not only to the West and South but also to the whole country.

We cannot hope to build up trade with Brazil if we begin by loading it with unnecessary burdens. If we reflect that there arrives at Rio de Janeiro nearly every day steamers from Europe, it can readily be perceived that a monthly steamer from the United States cannot successfully compete with them. In trade, time is often an essential consideration; hence, orders will nearly always be given to those who can fill them most promptly. Since it is desirable then to render more frequent the communication between Brazil and the United States, it seems to me that we should endeavor to effect this in such manner as to confer the greatest benefit on all parts of the country.

In the beginning both lines might receive the assistance of the Government in shape of a compensation for carrying the mails. Otherwise they will not be able to carry passengers and freight at the low rates that are absolutely essential to the rapid development of trade.

Other nations have comprehended the importance of giving such assistance. England, between 1862 and 1885, paid no less than £4,500,000 for the conveyance of the mails between the ports of Great Britain and those of Central and South America. Germany has recently granted a subsidy to three new lines of steamers intended to develop its commercial interests in foreign countries, paying 4,000,000 marks to the principal lines and 100,000 to the subsidiary line.

The line of steamers between Antwerp and South America receives the minimum compensation of 250,000 francs per annum. It is not only necessary that steamship lines receive some assistance, but that they may be able to count on it for a long and fixed period. No capitalist possessing common prudence (and this they usually possess in an eminent degree) will embark in any business unless he thinks he can see his way for many years ahead, especially in a business like this, which has to be built up gradually. After the two lines of steamers have been put on a sure footing every effort should be made to render them as useful as possible. For this purpose it is necessary in the first place that they reduce passenger and freight rates to the lowest possible figures.

I do not think sufficient attention has ever been given to the passenger trade on the steamers plying between Brazil and the United States, and yet this is, in my conception, a matter almost as important as cheap freights. Intervisiting is a wonderful promoter of commercial as well as social relations, hence the necessity for a low passenger rate between the United States and Brazil. It must not be supposed that the American manufacturer has only to introduce his goods into this market to obtain for them a ready sale. They will meet with vigorous competition, to overcome which much canvassing will be necessary. It is likewise of the utmost importance that the manufacturer study the market and sedulously endeavor to learn and supply the peculiar wants of the people. But even this will not be of itself sufficient. It is entirely impossible for the foreign merchant or canvasser in the necessarily short period allotted to him, no matter how shrewd, judicious, and experienced he may be, to form a thoroughly correct opinion of the situation. Experience has demonstrated not only here but elsewhere the correctness of this proposition.

"Resident merchants," say Commissioners Thacher and Curtis, "offer the best means to introduce and increase the use of goods. This is no experiment. It has resulted favorably in almost every city of South and Central America which we visited, and it has been tested over and over hundreds of times by German, English, and other foreign peoples. Mere drummers," they add, "in soliciting are nearly a total failure in either gaining or holding trade in these countries."

What these gentlemen assert was, as I am informed, thoroughly demonstrated in this market in the years immediately following the Philadelphia Centennial Exhibition, where the exhibit made by Brazil attracted much attention, and led to numerous attempts of American manufacturers and dealers to introduce their goods into this country.

Many of the persons making such attempts, finding at that time the views of resident merchants more or less colored by the desires and interests of the latter, sought to avoid this difficulty by disregarding these views and dispensing with the assistance and advice of the said resident merchants. In nearly every instance they paid dearly for their imprudence. As they and their representatives were unacquainted with the wants of the market, and with the methods of doing business here, and were even ignorant of the language of the country, they finally found

themselves, after much worry, vexation, and loss of time and money, compelled to withdraw, disgusted and disheartened, from their attempts. The wish to prevent, as far as possible, a repetition of such facts, which certainly tend to impede the development of commercial relations, leads me to suggest the expediency of establishing here an information office, with branches in our cities that are interested in Brazilian trade. The business of such an office would be to collect and circulate information useful in promoting trade; to receive, exhibit, and distribute samples, catalogues, &c.; and even to fill orders whenever they should be too small to be worth the attention of commission merchants.

The Americans who settled in Brazil, and to whom allusion has been made in some of my former reports, can, I think, be advantageously utilized in the introduction of American goods, especially improved agricultural implements and machinery—which constitutes one of Brazil's greatest needs, and which, perhaps more than anything else, except immigration, will enable it to overcome the financial difficulties which now surround it.

The implements now employed in agriculture here (I do not allude to the machinery used on the plantations in preparing the products for market, these being in many instances both costly and efficient) are few and imperfect; but the planters are accustomed to them and will not abandon them for others until the superiority of the latter shall have been practically and thoroughly demonstrated and the laborers instructed in their use. The trade in agricultural implements and machinery is now in the hands of persons who, having no knowledge of farming, know nothing of the practical value of the goods they handle, though they may have long experience in selling them. Many of the articles which they offer for sale are entirely unsuited to the country, and their importation only serves to check instead of promoting this branch of trade.

A letter recently received from a São Paulo planter by a gentleman in this city clearly and forcibly depicts the desires and perplexities of the writer, who is a representative of a large class of intelligent Brazilian agriculturists, anxious to improve the system of culture to which they are accustomed. Such men, if they be supplied with really good machinery and be taught to use it properly, will not only prove good customers, but will moreover gradually enable the spirit of progress to penetrate another class which is at present thoroughly wedded to the old methods and has no aspiration for any improvement.

The writer says:

> The importation of North American machinery into this country has been so badly conducted that the implements we have received seem to have been made only for sale and not for use—worthless plows, corn-shellers which break with the slightest shock, and other instruments which certainly cannot be the same as those employed in North American agriculture, of whose astonishing achievements by means of improved machinery we have such wonderful reports.
>
> I therefore desire your assistance in obtaining what I need. In the first place, please let me know the price of an improved corn-planter laid down in Campinas, and inform me whether it can be so graduated as to be used for planting rice and beans. I should like to know how many kinds of stump-pullers there are, and which kind is best, with an estimate of what it will cost laid down in this city (Campinas). I need one to pull up stumps from 9 inches to 2½ feet in diameter. Please inform me how it is worked. I have land from which I wish to remove the stumps before planting coffee, so as to be able to cultivate it afterwards with the plow.
>
> I will also need improved machinery for leveling the ground and breaking clods after plowing. I wish to know how the heavy stumps and logs should be removed from the land.
>
> In conclusion, I wish information concerning all the labor-saving implements and machinery employed in the United States with real advantage to the farmer.

It is evident that only a practical farmer could select the machinery required by this gentleman and instruct his laborers in its use. Therefore, I repeat that there can be no better canvassers than those American settlers to whom I have alluded, who, speaking the language of the country, and being intelligent agriculturists, can be readily taught to comprehend and explain the latest improvements in this line of goods, and select such as are best adapted to the wants of the Brazilian planter.

Besides establishing agencies and employing canvassers who thoroughly understand the Portuguese language, the goods they handle and the wants of the country, American manufacturers can advantageously use many other means of creating a demand for their merchandise and building up trade with Brazil.

Judicious advertising, the circulation of catalogues in the Portuguese language, the exhibition and distribution of samples, are all excellent ways of making their goods known to the Brazilian public.

I think they would find it worth their while to publish a periodical in Portuguese expressly for this purpose. A weekly or monthly illustrated paper, containing cuts and descriptions of machinery and implements, with a complete news summary and variety of entertaining matter, would be well received by the Brazilians, especially the rural population, and would prove a valuable advertising medium.

This paper might be published under the direction of the information office, if, as I suggest, such an office should be established. There might also be published in English, for the benefit of merchants and manufacturers, a paper intended to disseminate information concerning Brazil.

Very little is known of this country in the United States, and many of our people even suppose that Spanish is the national language of Brazil.

This error is not confined to the ignorant, but is shared by many persons otherwise well informed. I was recently much amused to find it in an address delivered by a learned lecturer to an intelligent audience in one of our principal cities. What made the mistake more ludicrous were the lecturer's allusions to the erroneous impressions concerning South American countries; impressions of whose prevalence he pointed out several instances in works which he quoted. Unwittingly he had already demonstrated the prevalence of such errors.

On the important question of building up trade with Brazil there still remains much to be said, and in my future reports I shall frequently take occasion to return to the subject.

H. CLAY ARMSTRONG,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Rio de Janeiro.

CHILI.

Report of Consul Romeyn.

The stagnation of trade and commerce in the Republic is very discouraging to the merchant class, a condition of affairs which keeps the rate of exchange abnormally high and business of all kinds in an uneasy and anxious state.

CHOLERA.

The new year has opened very inauspiciously for Chili, Asiatic cholera having been transmitted across the Andes from the Argentine Republic; and notwithstanding the energetic efforts of the executive authorities to confine the disease to the places where it first made its appearance, it has gradually and steadily spread, until now undoubted cases of the epidemic have occurred on traveled routes within a short distance of this city (Valparaiso). If it should become generally prevalent, which seems more than possible, the circumstance will have a most depressing effect on the trade of the country, small, even, as it now is.

TRADE WITH THE UNITED STATES.

During the last two or three years the excessively large accumulated stocks of imported goods have been gradually disposed of, and this branch of business is, in consequence, in a healthier and more satisfactory condition than for a long time past. Importers and consignees, generally speaking, have abstained from speculative adventures, and have confined their operations almost exclusively to the actual requirements of the markets. This will be more clearly shown by a few statistical figures.

In 1883 imports represented a value of $61,096,539 as compared with $59,462,154 in 1884 and of $41,969,225 in 1885. The imports from the United States in 1883 represented a total value of $3,601,492 as compared with $4,160,570 in 1884 and of $2,721,265 in 1885. The falling off of 34.59 per cent. in 1885 from the value of the imports of 1884 was principally in the following articles:

Articles.	Decrease.	Articles.	Decrease.
Refined sugar	$96,023	Dressed lumber	$90,775
Cotton flannel	76,021	Lard	41,098
Twilled cotton bagging	90,737	Railway plant, &c	858,789
Rough lumber	62,088	Cotton shirtings	101,550

The exports from this country to the United States in 1885 amounted to the value of $1,626,773 as compared with $1,336,315 in 1884 and $1,666,978 in 1883. In the exports to the United States in 1885 there were included $28,650 scrap iron for San Francisco, Cal.; $19,137 common wool; $63,827 merino wool; $88,909 nitrate of soda; $60,915 of iodine.

In considering the future probabilities of trade between Chili and the United States a wide distinction must be made between our imports from and our exports to this country. The field for the former is and must continue circumscribed within narrow limits, while for the latter it is, relatively speaking, unlimited. It is only necessary to glance at the staple products of this country to perceive that it is not likely, in the natural order of things, that the United States will ever become large purchasers of Chilian products. The principal products of this country are copper, silver, wheat, flour, wool, nitrate of soda, and guano, and the United States have need of none of these articles except the last three, and these only to a limited extent. It will be seen, therefore, that the similarity of products is the obstacle in the way of the development of trade between the two countries in the majority of the staple ex-

ports of this country. It is true that during the last two years or so several discoveries of manganese ore have been made, and that this is beginning to figure in the list of staple exports, but, in most cases, the trade in it is carried on upon such a small margin of profit that it is liable to be checked at any moment by a rise in freights, a steady upward tendency in current exchange, or by the adoption by Congress (which seems likely to happen at the next session) of measures for the resumption, within a short time, of specie payments.

EXTENDING AMERICAN TRADE.

The position of the United States with respect to this country in the matter of their manufactures differs widely from that with respect to the staple products of Chili. Here there is a large and ever-widening field for United States manufactures. There are business firms here, it is true, who are always ready to accept commissions to procure any kind of goods from the United States; but there appear to be few or none to push the introduction and sale of the tools and machinery, for example, in which our manufacturers excel. From time to time we find here men of the "commercial agent" or "drummer" class soliciting orders for United States goods and products; but they have done, perhaps, more harm than good, and native dealers are likely to deal cautiously with this class of trade representatives in future.

What is particularly desirable in the country are some genuine, representative American firms, especially in the hardware and machinery lines, who would push their trade only by keeping constantly on hand a stock of the best goods, and be alert to suggest alterations or modifications to home manufacturers, and to introduce new or improved articles from them suitable to the requirements of the country. It is by the establishment of houses of this kind that the English have here built up their commercial relations, and if we would develop ours with Chili to its fullest practicable extent we must adopt a similar course.

SHIPPING AND TRANSPORTATION.

In the year just ended (1886) there entered this port 14,972 passengers, by all vessels, and left it 12,558; but none of these were carried under our flag. The English, Germans, French, and Italians have their lines, and there is also a well-appointed competing Chilian coasting line, but none American. It seems to me that the time is ripe for the establishment of such on the western coast of South America. As far as native patronage is concerned there need be no fear, for American boats and seamen are favorites, as is shown in the latter case by the natives' preference for the commanders of the South American Steamship Company's boats, who are, almost without exception, Americans. And there can be no doubt that American trade would in some form follow in the wake of American steamers plying regularly.

Under present circumstances the cost of marine transportation from New York to Chili via Panama is about three times that from France or England.

COPPER.

In consequence of the low price of copper in the European markets miners here are turning their attention to gold and silver mining, in which pursuits a considerable revival is taking place. There still exist in the country immense, and it would scarcely be an exaggeration to say

inexhaustible, deposits of copper; but what with defective mining laws, cost of mining, smelting, conveyance to the coast for shipping, and freight charges to consuming markets, Chili can no longer compete successfully with other producing countries. In confirmation of this opinion I may mention that the receipt of the news of the resumption of the Anaconda mine at the beginning of last month had the effect of completely paralyzing this market for some days. It may seem strange at first sight that a country possessing such immense stores of mineral wealth as does Chili should be unable to compete successfully with other copper-producing countries, but the great mineral belt of the Republic is situated in the northern section, as distinguished from the central and southern, of the country. It is an arid and mountainous district, to which food for man and beast has to be conveyed from the central and more southern portions. The mines are generally at considerable altitudes; the system of mining and the appliances are generally of the most primitive kind. In hundreds of mining districts there are no roads, properly so called; and where there are railways these have been built in almost every case on so expensive a plan that they are so loaded with capital as to have to charge such high freights as to be of no benefit to mines of low "yield," and it is only with great difficulty that they can meet expenses.

A system of light, cheap railways, and the introduction and use of proper labor-saving mining machinery and appliances, would accomplish much in developing the vast mineral resources of the country, and this object is certainly well worth the careful study and attention of American engineers, capitalists, and manufacturers.

Before leaving the subject, I may mention that in the early days of mining only the very richest of ore was smelted or exported, and what was then considered of low yield, but would now be estimated as of fair, or, perhaps, high yield, was thrown aside as valueless. I am assured that in some of the old mining fields between Coquimbo and Huasco there are thousands of tons of this valuable ore lying on the surface, awaiting only capital and machinery to yield up its stores of gold, silver, and copper.

The total value of imports from 1844 to 1885, both inclusive, amounted to [consul omitted the amount!], of which the United States contributed $78,833,886. The total value of the exports during the same period was $1,192,399,512 of which amount the United States took $75,361,167.

As I have already indicated, the course of all trade will be affected to a greater or less extent by the actual visitation of cholera, but the main industry to be affected will be that of the smelting and export of copper. It is questionable if that metal could be produced in Chili, in normal times, for less than £35 per ton, and if anything should occur to destroy the influences which are now busy in keeping the rate of exchange above its true and natural value, in order to favor the exportation of copper, the position of that article in commerce may become very critical.

JAS. W. ROMEYN,
Consul.

UNITED STATES CONSULATE,
Valparaiso, Chili, January 10, 1887.

Declared value of exports from the consular district of Valparaiso to the United State during the four quarters of the year ended September 30, 1886.

Articles.	Quarters ending—				Total.
	Dec. 31, 1885.	Mar. 31, 1886.	June 30, 1886.	Sept. 30, 1886.	
Bar copper	.....	$68,723 45	.....	.....	$68,723 45
Chinchilla-skins	.....	.....	$1,720 00	$1,258 55	2,978 55
Goat-skins	.....	.....	6,853 25	70,387 87	77,241 12
Hempseed	.....	.....	.....	3,311 95	3,311 95
Quillai bark	$39 20	3,711 54	.....	446 10	4,196 84
Scrap iron	6,775 00	.....	3,630 00	816 00	11,221 00
Sheep's wool	1,809 90	105,196 82	303,549 87	50,525 35	461,081 94
Walnuts	2,224 27	.....	5,830 54	12,759 73	20,814 54
Sundries	12,522 16	1,339 07	177 97	2,376 49	16,415 69
Total in Chili currency	23,370 53	178,970 88	321,761 63	141,882 04	665,985 08
Total for preceding year	27,348 83	165,454 53	206,531 84	2,844 35	402,179 55

REPUBLIC OF COLOMBIA.

CARTHAGENA.

Report of Consul Smith.

Heretofore it has been the custom of this consulate to dwell at length upon the subject of the exports of Colombia, and to show that, to-day, the United States is her principal customer; but when I reflect that, comparatively speaking, Colombia is buying but little from us in return, the question occurs, Why does this state of affairs exist? I am reluctantly compelled to assert that it is not the fault of the Colombians, and to add that it is due to the indifference and want of energy on the part of the exporters of my country.

In a recent report to the Department on the want of a good rice machine in Colombia, and failure of American machines to give satisfaction, attention of the public was called that this consulate would send samples of Colombian rice to any manufacturer of rice machines. Not one letter on the subject did I receive from my fellow-countrymen; but from Germany and England letters were received to the effect that my article on rice had been copied from the consular reports and circulated extensively among the manufacturing elements of those two countries, and the consulate was asked to send samples of, and all possible information on, rice of Colombia.

On assuming the duties of this post some eight years ago, I was imbued with the idea that for push and energy the Americans were far ahead of any other nationality of the earth. The insinuation that we were indifferent to trade was scorned. I thought it was only necessary to show my countrymen the great opportunities that existed in Colombia for rapid extension of their trade, and they would soon fill the country with their presence, wares, and products. Numerous letters were written to trade journals and commercial dailies, and reports made to the Department for publication in "Consular Reports." I then lay back and awaited the coming tide. Every mail from home brought the consulate nearly a bushel of letters making further inquiries. This filled me with great expectations. Nights were even spent in answer-

ing these inquiries about every topic touched upon, as faithfully and as well as we knew how. But in eight long, weary years of waiting for the coming tide, just six representatives of American manufacturers turned up, two of them patent-medicine venders, an agent for a large flouring mill, a tobacco-house drummer, a commercial traveler for a cracker establishment, and a fire-arms manufacturer. Flour is purchased from us because it cannot be bought in any other country as cheap. We have an established reputation for patent medicines. Of course chewing tobacco is an American characteristic, and we make a specialty of furnishing arms to every nation on the face of the globe. But what of our manufacturers of print-goods, sheetings, drills, and other cotton products, matches, furniture, pianos, agricultural implements, hardware, clocks, glass ware, &c.? As relates to the trade of this country, I have arrived at the conclusion, they are either utterly indifferent, or are busily occupied in filling orders for other coun tries.

TOO MUCH EXPECTED OF A CONSUL.

How can a consul be expected to extend the trade of his country unless he receives the aid of the manufacturers. He can only call attention to the commercial wants of the district in which he resides, and show his fellow-countrymen the advantages of cultivating trade relations with the residents thereof. If his countrymen do not deem it advantageous to follow the suggestions of the consul, then, if there is no trade, who is to blame? Truly, a consul grows tired of repeating the same things over and over again; he loses courage when he perceives his efforts are not met with in a proper manner and spirit by his countrymen, whose interest it is his duty always to serve.

When I came here the Colombians were buying river steamers in the United States. They never thought of going to England for light-draught stern-wheel steamers—to a country where there are no navigable streams suited for boats of that class. I must protest that it is not the fault of the consul that the Colombians now prefer and are giving their orders for English-built boats in preference to those made in the United States.

Repeated attention was called in reports from this consulate that the American boats were not giving the satisfaction they should. The English-built boats consume less fuel, cost less, and are lighter built. Take the Dique Steamboat Company that runs light-draught steamers between this port and Honda, the head of navigation on the lower Magdalena River. The first steamer of this company was built in the United States. It could run very fast, but consumed an enormous quantity of fuel and carried but a small cargo. The second boat was built in England; it runs as fast as the one built in the United States, consumes half the quantity of fuel, and costs just one-half the money paid for the American boat. The result has been that American-built boats are at a discount here, and the English boat-builders are receiving numerous orders.

Within the past three years the Dique Steamboat Company has purchased three steamers from Yarran & Co., of London. It is safe to estimate that over a quarter of a million of dollars have been lost to American steamboat-builders within two years by their apparent indifference to the wants of the steamboat trade of Colombian rivers. The Americans know that they can and do build river steamers better than the English, but unfortunately the Colombians don't know it.

Unquestionably, river steamboat building in the United States is languishing on account of railroad competition. Then why not turn their attention—the steamboat builders—to South American rivers, where there is no opposition by land? On the great Magdalena River nearly thirty river steamers are now plying. Two other rivers in Colombia, almost equal in commercial importance to the Magdalena, namely, the Atrato and Sinu, will soon have lines of steamers operating upon them. A company, heavily subsidized by the Colombian Government, and partly American, will shortly place three steamers on the Atrato and Sinu Rivers. This company, although desiring to have its boats built in the United States, I am afraid will give the contract to an English boat-builder.

Why do Colombians prefer European cheese to ours? Because American cheese soon becomes rancid; likewise American butter. But why American potatoes and onions do not stand this climate as long as those raised in Europe, I am unable to answer, unless it is due to careless packing. To-day we witness the following in Colombian ports: Hardware coming from Germany; print goods and river steamers from England; onions and potatoes from France and Holland; cheese from England, France, and Holland; butter from Denmark; glassware from France; Yankee notions from France.

In comparison with what should be our trade with this country there is nothing imported from the United States but what cannot be well purchased in any other country. The Colombians import from the United States produce and manufactures to the value of several millions of dollars; but if our manufacturers and exporters do not keep wide awake and exhibit more energy than heretofore they will see nearly all of the trade slipping from their hands, and will make it only the more difficult for their sons to set about the task of recovering it. Great Britain, France, Germany, Belgium, and Spain are proceeding in a most practical manner to retain their present control of the trade of Colombia, and, I may with reason add, all the other Spanish-American nations. They may quarrel among themselves, but there is an unanimity of sentiment and feeling when the commercial possibilities of the United States in connection with this trade is taken into consideration. They are increasing the number of vessels in the lines of steamers already in operation, and are establishing new lines, heavily subsidizing them.

Possessing, apparently, far more foresight then the Americans, the Europeans are viewing with grave apprehension that the United States are inevitably destined to become their formidable rivals, and, realizing this, are taking the necessary steps to avert this destined competition as much as they can. The Belgian consuls, so I understand, have been especially instructed by their Government to send it complete reports as to the climate and resources of this country, and what advantages and concessions will be offered by the Colombian Government for the encouragement of Belgian emigration on a large scale. Great Britain has recently sent emphatic orders to her consular representatives to leave no stone unturned to retain and strengthen her grip on the trade of South American countries. Germany has just established a new line of steamers between Hamburg and Colombian and Venezuelan ports. It is well patronized.

The British steamship companies, composed of the Royal Mail, Harrison, and West Indian and Pacific lines, have increased their service in these waters. So have the French companies, and now comes the Spanish Transatlantic line of steamers, which has established a bi-monthly service between Spanish, Cuban, and Colombian ports, con-

necting with its New York and Havana line. The carrying trade between the United States and this Republic has heretofore been done by a British line of steamers—a most unpopular and unsatisfactory monopoly. The Atlas line, plying between New York and Colombian ports, is a corporation grown enormously rich in this trade, and has become so powerful that to compete with it requires a well-organized company with plenty of money to back it. There have been several lines started in opposition to it, but they did not last long, the Atlas Company having the longest purse.

There is strong talk of the establishment of an American line of steamers between New York, New Orleans, and Colombian ports. I am quite satisfied that such a route would in the end pay handsomely, but it must come prepared to lose money for the first six months, as it would take that time to convince the Colombian shippers that it was strong enough to compete with the British line. The projectors of the proposed line have gone so far as to ask a subsidy from the Colombian Government. I understand this Government has indicated its willingness to grant a subvention to this line, and a bill to authorize the same has already passed a second reading in the House of Representatives.

The United States possess a decided natural advantage over European nations in almost every respect, in the competition for this trade. Most of the products of Colombia are exported to our country, leaving a balance in her favor to buy our products and manufactures. The routes are twenty to thirty days shorter. Quicker sales made and returns realized. Yet, notwithstanding all these advantages, it is humiliating to see us placed at the tail end of the commercial imports into this country.

AN ENTERPRISE THAT THE AMERICANS MIGHT HAVE GOT.

A Franco-Belgian syndicate of capitalists has just secured a most important concession from this Government for the construction of two grand trunk lines of railroads between a port on the Atlantic and one on the Pacific to Bogota. The Government, in addition to a guarantee of 7 per cent. on a capital of $80,000,000, gives the company large land grants, and exempts from contribution and import duties all material and supplies that may be introduced into the country by the company. This enterprise could have been secured by American capitalists had they sent proper representatives out here to obtain it.

An enterprising American has obtained the privilege of constructing a tramway in this city, and has gone home to obtain the necessary outfit for its immediate construction.

Another American is putting up a soap factory in this city for a Colombian capitalist, and soap imported from the United States will soon cease to be known.

BUSINESS OPPORTUNITIES.

A match manufactory would pay. The city has a population, including suburbs, of 20,000, and can well sustain an ice factory. There is at present no ice used. I am sure the establishment of an ice company would pay well. There exists an absolute necessity for a saw-mill.

There is no boot and shoe manufactory on the coast. Foreign-made shoes are in great demand. This city would be a central point for such an enterprise.

A machine-shop for general repairs would pay well. All repairs to river steamers belonging to this port have to be made at Barranquilla—distant by river 160 miles—at great expense and loss of time. The necessities of the commerce demand the establishment of a furniture factory. All furniture is hand-made and very costly. There is little or no importation of furniture from abroad, on account of the enormous customs duties.

A bottling establishment for the purpose of bottling wines that come in casks and only pay a nominal duty, ales, pickles, mustard, and mineral waters, would bring handsome returns from the very start.

The city needs lighting by gas, and a contract for such can be made with the authorities of this department of the Republic.

The city has not an adequate water-supply, because the cisterns, though numerous, are kept in bad condition. Drove wells are almost a necessity. Why cannot some manufacturer of such wells send down his representative to drive one. If it proves a success, I am authorized to state that he can procure orders for the putting down of drove wells in this city to the figure of one hundred thousand dollars in this department alone. On the savannas of this department, where a million of cattle graze during the months of January, February, March, and April, water becomes so scarce that cattle have to be driven sometimes twenty miles to wells, and during this dry season thousands of cattle die from thirst.

Chemical works for the purpose of making extracts are greatly needed.

Good steamboat engineers and mechanics are in great demand. They can earn from $100 to $150 per month.

CLIMATE.

There is a very erroneous idea prevailing in the United States as to the sickly climate of Colombia. In this country all conditions of climate can be found. On the coast lands it is warm, but, with exception of the Isthmus, it is not unhealthy. On the coast there are two seasons, the dry and rainy; the dry begins in December and lasts until June. During this season the tropical heat on the coast lands is tempered by the refreshing breezes of the "trades." The prevailing diseases are of a malarial character; those of an epidemic nature rarely prevail. During the last eight years I have noted but one epidemic, that of small-pox. The number of deaths were quite small, due to the forced vaccination of all of the inhabitants. The epidemic, by these means, was promptly checked. About 300 miles distant from the coast the land is about 3,000 to 4,000 feet above the level of the sea, and the climate is a most delightful one to live in. The further you go in the interior the higher the land becomes, until you strike the plains of Bogota, where you reach an elevation of 10,000 feet above the level of the sea, and overcoats are in demand. As regards living in this consular district, I am prepared to state that if one but observes the laws of health the same here as he would in his own country he will live just as long and perhaps longer than if he had remained in his own country.

THE ROUTES TO COLOMBIA.

These are by the Pacific Mail from New York to Colon, where connection is made with the Spanish Royal Mail and Atlas lines for the ports of Carthagena and Savanilla. From either Savanilla or Bar-

ranquilla, which is the river port of Savanilla, or Carthagena, a river steamer can be taken direct for Honda, which is the river port for Bogota. The fare from Carthagena or Barranquilla to Honda is $50. The best route to the celebrated diggings of "Choco" on the Atrato River is via Carthagena, which is the port of entry for said river. The fare from here to the "Choco" district, of which the mining town of Quibdo is the center, is $50 by steamer. Passage can be taken in the Atlas steamers also from New York for Colombian ports, but as the boats of this line stop a number of days at Kingston, and from there go to Colon before coming here, the route by the Pacific Mail is much more expeditious and convenient. Passage to Colombia can also be obtained by the Red D line from New York to Curaçao, and from there to Savanilla and Carthagena by the German Royal Mail, Harrison, West Indian, and Pacific lines of steamers.

MINES AND MINING.

Considerable attention has recently been drawn to the vast deposits of gold in Colombia by the publication of an exhaustive treatise on mines and mining in Colombia by Señor Vicente Restrepo, the present minister of foreign relations of this Republic.

This work has been deemed so important in the mining world, and the demand so great for it, that translations have been made in English, French, German, and Italian. Through the medium of this book of Dr. Restrepo nearly a half a million of dollars' worth of American mining machinery has within the past year been introduced into Colombia by American capitalists for the purpose of working old and developing new mines. Every steamer that arrives brings miners and prospectors from California, Idaho, Washington Territory, and other mining districts of our country *en route* to the gold diggings of Tolima, Antioquia, and the "Choco." Two companies are now being organized in Boston for the purpose of alluvial and hydraulic mining on the Atrato River in the "Choco" district. As a great rush is anticipated this season from the number of inquiries I receive each mail, I deem it a duty to caution my fellow-countrymen not to be too sanguine. It must be borne in mind that in the mining regions labor is scarce, food high, and absolutely no roads to travel on. Paths have to be cut. Mining in Arizona is but child's play in comparison to mining even in the best sections of Colombia. The language spoken is Spanish, the difficulties in passing the custom-houses, the want of facilities for transportation, are all obstacles that must be encountered at the very beginning.

EDMUND W. P. SMITH,
Consul.

UNITED STATES CONSULATE,
Carthagena, Colombia, December 28, 1886.

REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 83.—SEPTEMBER, 1887.

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1887.

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Name.	Country.	United States equivalent.
Arroba	Mexico	25 lbs.
Bolivar	Venezuela	$0.193
Deciature	Russia	2.6997 acres.
Florin	Austria	$0.359
Franc	France	$0.193
Kilogram		2.204 lbs.
Liter		1.0567 wine qts.
Mark	Germany	$0.24
Meter centner		110 lbs.
Milreis (1,000 reis)	Brazil	$0.546
Pood	Russia	36.06 lbs.
Ruble	Russia	$58.2
Yen	China	$1.04

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CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES, ETC.

No. 89.—SEPTEMBER, 1887.

TIERRA DEL FUEGO.

REPORT OF CONSUL BAKER.

There are few parts of the habitable globe about which so little is definitely known as "Tierra del Fuego," that vast archipelago which forms the southern extremity of the continent of South America. Since the great navigator Magellan in 1520 discovered and passed through the straits which bear his name and which separate it from Patagonia, down almost to the present time, it has been a land of mystery and uncertainty, a *terra incognita*. Even the name by which it is known is a misnomer, for though it is called "the land of fire," it is rather a land of frost. It received its appellation of "Fireland" from the simple circumstance that when Magellan passed its northern coasts, every night his attention was attracted by small fires along and through the innumerable channels which he supposed in some mysterious way appertained to the country, whereas they were lighted by the inhabitants as signals or to assist them in their nocturnal fishing operations. During the three hundred and fifty years which have elapsed since its discovery, owing to the rough seas and persistent winds which for a large portion of the year prevail along its shores, sailing vessels doubling Cape Horn have given it a wide berth; while the passage through the straits, owing to currents and devious channels, is only practicable for steamers, and these have only been taking that route within the last few years.

ITS EARLY HISTORY.

For these reasons the history of Tierra del Fuego, or "Fireland," is soon told. Indeed, what was supposed to be known in regard to it was so mixed up with strange and extraordinary stories and fictions, owing to the fertile imaginations which travelers sometimes pos-

sess, that it was difficult to tell what to believe. Cannibals, curiously shaped beasts of prey, and strange amphibious animals were once everywhere to be found there; but they have all disappeared with the additional knowledge which we now possess of that country; and it has at last quite emerged from that mysterious, fantastic condition in which for all these centuries it has reposed.

ITS FIRST EXPLORERS.

Very few of the early navigators did more than sail along its shores, touching here and there for a few days, and occasionally having a glimpse of the inhabitants. In 1525 Garcia de Laiza repeated the voyage of Magellan through the straits, but died during the passage. In 1534 Simon de Alcazaba undertook the same route, but he was killed by his mariners in revolt, all of whom afterwards miserably perished. Then, in 1539, followed the expedition of Alonzo de Camargo, who succeeded in making the first direct passage from Spain to Chili. In 1577 the English navigator Drake also sailed through the straits, making the entire passage in seventeen days.

The same year the viceroy of Peru sent Captain Pedro Sarmiento de Gamboa with orders to examine the straits in detail, and he reported the perfect fitness of the country for the location of a colony. His report was approved by the King of Spain, who named Sarmiento captain-general of all the country south of the Straits of Magellan. Sarmiento left Seville on the 25th of September, 1581, with twenty-three sail, carrying soldiers and colonists and a full outfit for the proposed colony. Everything, unfortunately, conspired against the expedition. A number of the ships were lost in a tempest; then insubordination ensued on board the fleet. He finally reached the straits, but a continuation of contrary winds prevented him from reaching or finding the locality which he had previously selected for the colony. He returned to Rio Janeiro to recruit and replenish his stores, after which he again set sail for Tierra del Fuego. Still further mishaps, however, were in store for him, and by the time he reached the straits he had only two ships, carrying two hundred and eighty colonists and a few soldiers. He finally managed to reach a point on the peninsula of Brunswick, where he concluded to establish his colony, to which he gave the name of Jesus; but for greater security, and the better to guard against the attacks of the Indians, he founded a second settlement further down the coast under the name of Ville de Saint Philippe. The two places, under the energetic measures which he adopted, made a very promising beginning. But during one of his voyages to Rio Janeiro after supplies he was captured by Captain Drake of the English navy and taken to England, where he was subsequently set at liberty by Queen Elizabeth. During his absence the unfortunate colonists ran short of the necessaries of life, and a great number of them miserably perished by famine. In 1586 Sir Thomas Cavendish penetrated the straits and touched at Saint Philippe, where he found a few of the colonists still alive but suffering the greatest distress. He consented to take them on board, but he was unwilling to hunt up those who had wandered into the forests or remained at the other settlement.* He very ap-

* Burney, in his "History of the Buccaneers," says Cavendish found twelve men and three women, but that he refused to aid them, and that subsequently, in retaliation for such cruelty the Spaniards in Chili hanged a number of his men. In the present age one would suppose that he was the proper man to be hung,

propriately gave to the locality the name of Port Famine, which it has retained ever since.

After this a number of voyagers visited the straits in succession, among them Merrick, in 1589; Chidley, in 1591; Hawkins, in 1593; Oliver Van Noort, in 1598;* Siebold de Wort, in 1599, and Joris Spilbergen, in 1614; but they added nothing of consequence to the stock of information in regard to Tierra del Fuego.

In 1615 the French navigator Le Maire first passed through the strait which separates Tierra del Fuego from States Island, a strait which still bears his name, and discovered Cape Horn, which he was the first to double. About the same time Philip III of Spain commissioned the brothers Nodal to make a general reconnaissance and survey of all the coasts at the southern extremity of South America; and it is a remarkable fact that during the time it took to make these surveys those navigators did not lose a single man.

In 1695 the French Government fitted out an expedition with a view to selecting ports of refuge for their vessels on the South American coast, Captain De Gennes making the first reconnaissance. In 1698 a French company was formed for establishing colonies in the various parts of South America, and to that end Captain Beauchesnes-Gouin for two years explored the straits and the archipelago. He took possession of the principal island and called it Louis the Great. These attempts at occupation, however, were not followed up, and immediately after the accession of the Bourbon dynasty to the Spanish throne the French Government, through fear of wounding Spanish susceptibilities, desisted from its project.

There were no further explorations until 1763, when the English mariners Byron and Carteret made their famous voyages around the world. Both passed through the straits and touched at Tierra del Fuego, and in their reports rectified many errors in regard to that country which had previously been published. Byron visited the remains of the Sarmiento colony, and says he "could not understand why so delightful a spot should be called Port Famine." He further says: "Flowers, trees, and birds delight the traveler; fish abound in the waters; while lofty mountains form a magnificent background to the picture." Repassing the straits he fell in with a number of Fuegian Indians, to whom he gave biscuit and clothing, and "a woman of fair skin was pointed out to him by the rest, as if to express that she was of English origin, being perhaps the wife of some sailor or colonist cast away on those shores."

The next effort to settle Tierra del Fuego was in 1767, when Bucareli, the Spanish governor of Buenos Ayres, charged with the duty of reoccupying the Falkland Islands, which France had ceded to Spain, undertook to establish a colony on one of the islands of Tierra del Fuego, situated in latitude 54° 40′. The locality seemed to be very suitable, and the natives peacefully watched, and even assisted, the colonists in their labors; but the location was so remote from civilization, and it seemed so like a place of exile rather than of promise, that the settlement attained to scarcely any development, and it was finally abandoned. The same year Captain Samuel Wallis visited the country, and brought back the most unfavorable reports in regard to it. He said "it was a savage region, where, even in midsummer, the climate was cloudy, cold, and tempestuous; where the

*At Port Famine Captain Merrick picked up a Spaniard, the last remaining survivor of Sarmiento's colony, who gave a fearful account of the sufferings he had undergone. He, as well as Captain Merrick, died on the passage home.

valleys were without verdure and the mountains without trees;" and where, indeed, "the whole land seems like the immense ruin of a former world." Admiral Anson, who also skimmed along its shores, pronounced it "the most horrible country which it was possible to conceive." Captain Cook, the famous navigator, who lost two of his naturalists in their attempts to climb one of the mountain peaks on the western coast, says: "It is the most savage country I have seen. It seems entirely covered with mountains and rocks, without the least appearance of vegetation, the mountains terminating in horrible precipices or rugged peaks reaching to an immense height. There is no place in the world which offers such desolate landscapes." King, Wyse, and Cunningham, in their reports, have painted the country in almost equally somber colors. The first affirms, however, that "the vegetation is magnificent in some places, and under the shelter of the great forests some plants are found which would be considered very delicate in England;" while Wyse speaks of the "dense forests, with trees which retain their leaves the whole year," and "of the magnificent landscapes, now smiling, now severe, which offer themselves to those who navigate the coasts of Admiralty Sound."

SURVEYS OF THE ADVENTURER AND BEAGLE—DARWIN'S REPORTS.

The most important expedition, in a scientific point of view, which ever was sent to Tierra del Fuego was that of Captain King, of the British navy, who in 1826, with two vessels, the Adventurer and the Beagle, was commissioned to make surveys and charts of the coast of South America from the River Plate to Cape Horn. Captain Stokes was at first in command of the Beagle, but upon his death in 1828 Captain Fitzroy took his place and devoted four years to the work, making a full exploration of the devious and dangerous channels of the straits. The expedition returned to England in 1830, and the surveys were published in 1832. Captain Fitzroy brought home with him four Fuegian Indians, and placed them at school at Walthamston. They were known as "York Minster," aged 26 years; "Boat Memory," aged 20 years; "Jimmy Button," aged 14 years, and "Miss Basket," aged 9 years. The second, who was the most docile and the cleverest of the party, died of small-pox at Plymouth Hospital, and was much regretted. They had all been seized as reprisals for a boat belonging to the ship which had been stolen by their people; and Captain Fitzroy promised to bring them back to Tierra del Fuego. King William IV and the Queen took much interest in them and their education, but Captain Fitzroy was unable to prevail on the Government to fit out another expedition. He thereupon chartered the brig John, of London, to carry himself and four others back to Tierra del Fuego. The Admiralty, on learning this, finally changed its decision and gave him again his old vessel, the Beagle, to carry out his great project of completing a chain of meridian distances around the earth. As he was desirous also of making botanical and geological observations, he had the good fortune to prevail on Mr. Charles Darwin, a young man who had already shown great talent, and who afterwards became the distinguished scientist, to accompany him on the expedition. On the 15th of December, 1832, the Beagle sighted Cape San Sebastian, and some painted Indians wearing skins were seen running along the shore. "York Minster" and "Jemmy Button" wanted Captain Fitzroy to fire at them, saying

that they were bad men. Fitzroy here tells us of the reflection which forced itself upon his mind, that when Cæsar came to Great Britain he found Fitzroy's ancestors dressed in skins and painted like those Fuegians. The Beagle came to anchor in the Bay of Good Success, when "Minster," "Button," and "Miss Basket" were restored to their friends. "I was flattered," says Captain Fitzroy, "at the thought that many a poor shipwrecked seaman might find friends and protectors in the Fuegians whom I had educated in England." Two years were spent in additional surveys of the coast. His labors there and elsewhere, extending over nine years, were considered of such value that the Royal Geographical Society conferred upon him its gold medal "for the first chain of meridional distances around the earth and complete surveys from the River Plate to Guayaquil." His sailing charts for the Straits of Magellan and the various channels connected therewith are still in use by sailing masters.

Mr. Darwin's part of the expedition is no less memorable and well known. The zoology of the voyage of the Beagle includes an account of the fossil mammalia, by Professor Owen; of the living mammalia, by Mr. Waterhouse; of the birds, by Mr. Gould; of the fish, by Mr. Jenyns; and of the reptiles, by Mr. Bell; Mr. Darwin appending to the descriptions of each species an account of its habits and range. Besides this, Mr. Darwin published separate works entitled "Researches into the Natural History and Geology of Countries Visited during a Voyage Around the World," "Geological Observations on South America," "Volcanic Islands," &c. The first-named work, intended for the general reader, gives some admirable chapters in regard to the Argentine Republic, and especially Patagonia. Those in regard to Tierra del Fuego, however, have a special interest, from the fact that they furnish us the first important information we have of an authentic or reliable character in regard to the physical peculiarities of the southern extremity of South America. It is evident, however, that he failed to obtain a very intimate acquaintance with the interior of Tierra del Fuego or its physical conditions. At any rate, his estimate of the country is unfavorable to the extent of being unjust and untrue. He says:

> Tierra del Fuego may be described as a mountainous land, partly submerged in the sea, so that deep inlets and bays occupy the place where the valleys should exist. The mountain sides, except on the exposed western coast, are covered from the water's edge upward by one great forest. The trees reach to an elevation of between 1,000 and 1,500 feet, and are succeeded by a band of peat with minute alpine plants; and this again is succeeded by the line of perpetual snow, which, according to Captain King, in the Straits of Magellan, descends to between 3,000 and 4,000 feet. *To find an acre of level land in any part of the country is most rare!*

MORE RECENT EXPLORATIONS.

To correct some of the gross inaccuracies and absurd blunders which have thus during all these years been furnished to the world, five years ago Lieutenant Bové, of the French navy, by permission of the Argentine Government, and partly under its patronage, made an expedition to the southeastern portion of Tierra del Fuego, and the result of his labors was a report of great value on the fauna, flora, and general characteristics of the country and the condition and language of the people. A still more recent and much more valuable contribution to our stock of knowledge in regard to that region has been furnished by the Rev. Thomas Brydges, who, as a missionary of the Church of England, has resided in the southern portion of Tierra del

Fuego for over twenty-five years, and where, with his wife and children, he has devoted himself to the work of diffusing civilization and Christianity among the inhabitants. During his long missionary labors Mr. Brydges has become thoroughly identified with the country and with the singular people who occupy it, and has accumulated a large amount of interesting information in regard to both. He has recently been on a visit to Buenos Ayres, with a view to obtaining from the Argentine Government certain concessions, whereby to increase his usefulness as a missionary and to assist him in his efforts to develop the resources of that country. While in Buenos Ayres, he delivered an address on the results of his observations and explorations,* which has added very much to the sum total of exact and authentic information in regard to Tierra del Fuego. Besides this, Don Ramon Lista, a well-known explorer and a member of the Geographical Society of Buenos Ayres, has just returned from an expedition, scientific and geographical, fitted out under the direction of the Government to that part of the island which forms the eastern and southeastern coasts of Tierra del Fuego, and has brought back a large addition to the general knowledge on those subjects. Mr. Julius Popper, a man of scientific antecedents, has likewise just completed, in the interest of a mining company, an exploration entirely across the country from Useless Bay, on the west side, to San Sebastian Bay, on the east, and thence along the coast. From all these sources I have collected many facts and discoveries which refute and correct the errors and blunders of former explorers, and which may be of interest to the people of the United States.

BOUNDARY LINES OF CHILI AND THE ARGENTINE REPUBLIC.

I may premise, that on all the old charts and maps Tierra del Fuego is put down as belonging to the Argentine Republic. Subsequent to these, however, Chili set up a claim to the ownership, and insisted that the entire archipelago was a part of her territorial possessions. It would appear that the Argentine Republic had the best *paper* title, inasmuch as the boundaries of Chili, as set forth in her constitution, do not cover any territory east of the ridge of the Andes or south of the Straits of Magellan; yet, while the Argentine Republic quietly rested its case on its ancient documents and records, Chili, more enterprising or more in earnest in the matter, proceeded to take actual possession of the territory in dispute by planting colonies at Sandy Point (Punta Arena) and other places on the north side of the straits; by erecting beacons and other helps to navigation along the shores, and by establishing a government and placing a governor in charge of the country. Indeed, by gradual encroachments, Chili finally set up a claim not only to all of Tierra del Fuego but to a large part of Patagonia fronting on the Atlantic; and at last actually went so far as to seize merchant vessels loading guano under permits of the Argentine Government, at the Santa Cruz River, 200 miles north of the straits. This awakened the Argentine Republic to a realizing sense of the situation; and at once a war of diplomatic notes ensued, followed by ministers asking for their passports, and a rupture of the friendly relations between the two nations. A war seemed imminent; indeed, the disputing parties were on the verge of hostilities, when, through the friendly interposition and kindly offices of the United States representatives at Buenos Ayres

*Reported for and published in *La Nacion* of Buenos Ayres.

and Santiago, a treaty of limits, all the terms of which were agreed to by telegraph, was ratified, thus saving the two countries from a desolating war. This treaty was signed on the 23d of October, 1881; and by its terms the backbone of the Andes is still made the dividing line, north and south, between the two countries to the fifty-second degree of latitude; thence, however, the line is made to run almost due east to Cape Virgin, on the Atlantic coast; and then due south through Tierra del Fuego, parallel with the sixty-eighth degree of longitude. So that, for the sake of peace, Chili has obtained the lion's share of the division, securing not only a large lateral slice off of Southern Patagonia, but a very large proportion of the islands of Tierra del Fuego. Only the tongue of that archipelago, running to the eastward and including States Island, now belongs to the Argentine Republic. Cape Horn itself is now the southern extremity of Chili. By the terms of the treaty, the Straits of Magellan are neutralized and free to the navigation of all flags; but Chili still asserts and exerts her sovereignty over them.

THE ISLANDS COMPOSING THE ARCHIPELAGO.

The group of islands forming the archipelago of Tierra del Fuego lies between latitude 52° 40′ and 56° south and longitude 63° 40′ and 75° west. The largest of these islands is generally known as Tierra del Fuego, though it has been heretofore called "King Charles South Land," and the natives themselves call it "Onisin," or the land of the Onas, the name of the inhabitants. The next largest islands are called Navarino, Horte, Clarence, Gordon, Wallaston, and States Islands, besides which there is an immense number of small ones scattered through the western channels, some of them consisting merely of rocky peaks projecting out of the water. The mountainous line of the coast along the principal island is cut at frequent intervals by the sea, thus forming countless peninsulas and inlets.

Tierra del Fuego from Cape Pilar, on the west side of the group, to Cape San Diego, on the east, has a width of 352 miles; and from Anegada, on the north, to Cape Horn, on the south, it has a length of 228 miles. Thus the size of the archipelago may be put down as upwards of 80,000 square miles; about as large as the State of Kansas.

GENERAL APPEARANCE OF THE COUNTRY.

The aspect of the country, instead of being a mountain of eternal snow, as Darwin says, is exceedingly varied, presenting almost every diversity of surface, elevated mountains, deep valleys, rolling table lands, fertile plains, numerous lakes, and frequent water-courses.*

*Ramon Lista describes the island as follows: "This great southern island has been called sterile, and even uninhabitable, through an error consecrated by time. This may, to some extent, be true in reference to that part of it now belonging to Chili, but it is false and ridiculous as to that portion which lies along the Atlantic and belongs to the Argentine Republic. Those who suppose that the eastern part is a range of mountains covered with eternal snows and inaccessible from the ocean are greatly mistaken. Argentine Tierra del Fuego presents two aspects: From Cape Holy Ghost to Cape Peños there are valleys more or less extensive, covered with splendid groves and irrigated by large rivers, some of them navigable. This region enjoys an agreeable temperature, with very little snow during the winter. South of this the appearance of the country changes, and extended forests appear, where the grass is not so abundant nor the rivers so large. The face of the country here is something like that of Switzerland, with small lakes, elevated mountains, and valuable timber forests. On the plains there will yet be planted a great pastoral industry; while I believe the mountains will be found to contain valuable mineral deposits."

Occupying a large portion of the extreme north, and extending from one extremity to the other of the straits, are continuous chains of mountains, sometimes running into peaks several thousand feet in height. These ranges of mountains, as yet, form quite an impassable barrier by land between the northern and southern portions of the country, since their tops are not only covered with snow throughout the year, but along their sides they present a continuation of forests so dense as to be impenetrable. I suppose, however, that upon further exploration passes will be found which can be made practicable. Adjacent to these mountains on the south is a wide belt of elevated and rather barren plain, running the entire width of the island, from Useless Bay on the west to the northern part of San Sebastian Bay on the east. Then succeed elevated table lands, quite covered with forests. South of this is another chain of sierras, running from the lower part of San Sebastian Bay, almost through the center, in a southwesterly direction to Admiralty Bay. Then, to the south, the country opens into an extended plain or pampa, which occupies all the central portion of the island, and which is quite destitute of trees, except small patches here and there of hardwood and shrubs. It is covered with an abundance of rich grasses, which, in some parts, are very luxuriant and well suited for both cattle and sheep, especially the former. The extreme southern portion, again, from Cape San Diego on the east to Brecknock Head on the west is mountainous—sometimes quite Andine in appearance, some of the peaks being volcanic—with numerous glaciers and dense forests. In many places the glaciers extend from the higher valleys to the sea, breaking into immense masses, which, moving down the sides, are projected in most fantastic shapes upon each other below. Beyond these, on the west, are Mount Sarmiento and Mount Darwin, which run up to a height of 7,000 feet above the level of the sea.

GEOLOGY OF TIERRA DEL FUEGO.

The geological formation of Tierra del Fuego quite corresponds to that of Patagonia. The mountains, broken and disjointed by the convulsions of nature, with wide seas now running where they have been depressed, are but the continuation and southern extremity of the Andes; while the plains and uplands partake of the same geological characteristics as those which distinguish the Patagonian steppes. In some parts the formation is decidedly volcanic. This is especially the case in the islands of London and Clarence. In the island of Picton and in parts of Onisin pumice stone is found in large quantities. In the island of Packsaddle there are several remarkable basaltic hills, and this formation is frequent in the Straits of Ponsonby and other localities. Other igneous rocks everywhere crop out of the mountain sides. Granite is very prevalent and quartz abounds. No limestone has yet been found in the country. Iron also seems to be wanting. Some specimens of lead have been exhibited. It is said that coal has been discovered in Slogget's Bay and Cape Holy Ghost; but from the best information I have, the latter formation is merely lignite. In Valentine Bay, as also in Slogget's Bay, there is a black ferruginous sand of a brilliant color, which may indicate the existence of gold in those places. While no gold has yet been discovered in the southern portions of the country, the precious metal has been found in considerable quantities in various places in the northern. For a number of years the Chilians have been washing gold at the foot

of the chain of hills which forms the coasts of Useless and Future Bays. Señor Fredrico Mourglier, who has had much personal experience in the country, says that "the existence of gold on the eastern coast is undoubted and only requires labor to separate it from the sands; while the northern part of Tierra del Fuego requires a practical exploration to disclose its richness." A well-known English gentleman, who now resides in Córdoba as the head of a commercial house, who was wrecked off States Island several years ago, and lived for some weeks at Good Success Bay, the extreme eastern point of Tierra del Fuego, makes the statement that he "found gold there, the rocks on the coast all being impregnated with the shining ore." Señor Felix M. Paz, the governor of Tierra del Fuego, in a communication to his Government gives an interesting account of a visit to San Sebastian Bay and of the auriferous nature of the sands at that point. He says: "The specimens we obtained are fine, very black, and when washed in a very primitive fashion we obtained leaflets of pure gold, twenty of which went to the gram." He proposes a scientific exploration of those regions, and is satisfied that "there are there the elements of a new industry which will metamorphose that desolate land." Since then other parties have visited San Sebastian Bay and fully confirm what the governor states on this subject. Indeed, judging from the formation and from the reports of various persons who have prospected there, it is believed that gold abounds along the whole extent of the Onisin chain to the Straits of Magellan and the Atlantic Ocean, and from Useless Bay to that of San Sebastian. In all that country water-courses abound, and wood in great quantities is found for fuel, thus assisting in the mineral development of that portion of the country.

CLIMATE, TEMPERATURE, ETC.

The meteorology of Tierra del Fuego is yet to be studied. The climate is certainly not the best in the world, by a great deal, but it is not as bad as it has been painted. Thus far, each voyager to that country has hastened to give us his impressions from his own standpoint, only imperfectly guessed at after a few days' sojourn. These are generally unfavorable, but I have conversed with ship-masters and passengers who have time and again steamed through the straits, and they have spoken of the delightful weather which they experienced during the entire passage. Of course, in this matter very much depends on the season; and there is no doubt that in the southern portion during the six months of winter, or what goes for winter, there is considerable wind and sleet and snow. But, after all, the thermometer proves that the weather is not so cold as it is in some of our Northern States. It is not strange that those whose systems have been relaxed by the very temperate, if not semi-tropical, climate of the Argentine Republic, should exaggerate the cold of Tierra del Fuego, since they are in a condition to suffer much more from it than those who are accustomed to a climate like that of Maine. At the same time, in a country extending through so many degrees north and south and with a surface so varied, there must be naturally considerable diversity of climate. Mr. Brydges tells us that in the humid regions of Western Tierra del Fuego frosts are almost unknown, while in the central and eastern parts, where the sky is nearly always cloudless, there are four months—June, July, August, and September—during which the cold is quite severe. Owing to the mountains in

the north the climate is comparatively dry, while along the southern coast it is much of the time very humid and very cloudy. While in the former region the cold of winter is much severer than in the latter, yet in the summer the mean temperature is much higher. Mr. Brydges adds that the want of sufficient heat in summer is the great drawback to the climate of Southern Tierra del Fuego, a greater inconvenience, indeed, than the cold during the winter, which has never been known to descend lower than 12° Fahrenheit, while the highest summer temperature only reaches to 75°. He says that the climate in that part of the country does not appear to be uniform, differing very greatly in different years, and the variations of a single day are often very remarkable. In Ushvia,* Beagle Channel, where he resides, destructive frosts have been known to occur during almost every month of the year, and occasional snow storms have been experienced even in January, which is the very middle of summer; so that in that portion of the country all but the hardier vegetables are an uncertain crop. The grasses, however, are sufficient to carry the horned cattle and goats through the winter, though they sometimes become very poor from insufficient food. On the coasts in the vicinity of Sandy Point the summers quite correspond to those of our own Northern and Northwestern States, affording many warm days of uninterrupted sunshine. Indeed, in all the northern portion, under a much higher temperature, the various grasses grow very luxuriantly, and potatoes, beans, peas, and generally all the common vegetables reach to great perfection. A gentleman who was for some time in the vicinity of Useless Bay during the month of November, which about corresponds to our month of April, informs me that the range of the mercury was from 40° to 65° Fahrenheit. Indeed, if it were not for the winds, which are exceedingly prevalent in all parts of the country, the climate of Tierra del Fuego would be much more moderate than that of Canada. We all know, however, that raw, damp winds are much better conductors of cold than dry weather at a far lower temperature.

VEGETATION AND FORESTS.

The nature of the vegetation of Tierra del Fuego has already been incidentally referred to. In all the pampa or prairie region there is a great abundance of sweet grasses, of several varieties, the moist climate assisting them to a growth which is in some places exceedingly rank. There are also numerous fruit-producing shrubs and vines. Mr. Brydges informs us that wild strawberries, wild raspberries, wild gooseberries, and wild grapes grow spontaneously all over the country and attain to an immense size. Besides the ordinary vegetables which I have heretofore mentioned, the natives also cultivate celery and mushrooms. Among the edible plants is a great variety of parasitic *fungi*, indigenous to the country, which generally depend from the trunks of the trees—sometimes growing to be immense masses. Their internal structure presents a series of orifices, which are filled with sweet juices and which the natives are very fond of as an article of food. The kinds which grow in summer are dried and smoked for future use. Those which mature in winter are very similar in appearance, but have a different aroma. Nearly all the woody plants exude a gummy substance, which, after being boiled and sweetened, is very pleasant to the taste. It is thought that, with the development of the country, this gum may come to possess considerable commercial value.

*Mr. Brydges spells the name *Ooshvia*, while the Argentines write it as above.

The forests, which extend over a large portion of the country, are quite limited in variety. They contain but five kinds of trees, three of which are species of the beech, and the other two are winter-bark, which resembles the magnolia, and a species of cypress, quite peculiar to the country. Of the beech the most valuable variety is the evergreen, which produces magnificent timber with a diameter of 6 feet and an altitude of 80.* The common beech grows to almost equal proportions; while the third species, which is called aromatic, is much smaller, but produces a better wood for planking. The timber of the winter-bark, as also that of the cypress, is of little use on account of its small size. The latter, however, is represented to be a most beautiful tree and one of the peculiar charms of the country. There are twenty-five varieties of shrubs or arborets. One variety, called the hardwood (*leña dura*), with an evergreen leaf, abounds in all parts of the country. The leaf furnishes a most excellent article of food for the cattle and guanacos, while the wood is valuable on account of its fine grain, which admits of a polish like marble. Where the subsoil is rocky or full of pebbles the vegetation is sterile; where it is sandy or of clay, the country is covered with grasses, among which are found the tussock, the wild oat, and the ganga. Owing to the rankness of the vegetation, which year after year has accumulated upon itself, in some parts the surface is covered with a thick bed of swampy peat, which yields to the feet.

RIVERS AND WATER-COURSES.

While there are probably few streams in the country which are of sufficient size ever to be utilized for navigation, there is a large number of small rivers and water-courses, which carry off the rains and melting snows from the mountains, and thus assist to irrigate the lower plains. Two of the most important of these are the Rio Rosetti and Rio del Oro (Gold River), which have their sources in the northern chain of sierras, and, after coursing through deep cañons and precipitous bluffs, empty into Lomas Bay, in the Straits of Magellan. Farther to the westward is a number of creeks, which find their outlets, respectively, in Phillip's, People's, and Future Bays. Emptying into Useless Bay is the St. Mary's River, which flows southward, also from the northern sierras, along the Balmaceda range, in a remarkably tortuous channel, with immense bluffs on either side. At the southern extremity of that bay are also found the Morazza River and a number of large arroyos which drain the high lands to the eastward. On the Atlantic coast are the Cullen River and the St. Martin River, both considerable streams, the first having its outlet south of Cape Holy Ghost, and the second in San Sebastian Bay.† South of this is the Toldo River ("Rio de los Toldos"), which runs in a very crooked channel into the Atlantic. According to Mr. Lista it has a breadth of 40 to 75 feet, a rocky bottom, and a current of two to four miles per hour. Then comes the Rio Pelegrini, named by Mr. Lista for the present vice-

*Ship-loads of this timber now find a market in Buenos Ayres.

†The names of all the foregoing rivers are those which Mr. Popper has assumed to give them, and they may yet be changed. The names of the rest of the rivers are those which Mr. Ramon Lista has given them, and they likewise are liable ultimately to be changed by the Argentine Government. In none of the maps of Tierra del Fuego hitherto published does it appear that there are any rivers in that country.

president of the Republic, which he says is the most important river in Tierra del Fuego. It is supposed to rise in the central Cordilleras of the country. Mr. Lista found great difficulty in crossing it on account of its depth and current. Its breadth is from 225 to 300 feet, with frequent small islands along its channel. Its depth is from 6 to 10 feet. It flows through an alluvial valley, whose vegetable richness is marvelous and capable of sustaining a large pastoral industry. The bed of the stream is somewhat irregular, and the explorer everywhere saw indications of the great floods which annually, on the breaking up of winter, come down from the mountains, bringing with them an immense amount of *detritus*. The current is about five miles an hour. Mr. Lista says: "I am of the opinion that it can be navigated by small steamers for many miles into the interior." Near Cape St. Agnes is another small river, which Mr. Lista has named the Rio Twelfth of September, which flows down a deep cañon, with dense forests of immensely high beech trees on each side. Near Cape St. Paul is likewise a small river, which has its source in the high lands of the interior. It is about 50 feet wide, with a very rapid current. There is abundant vegetation along its banks, while at its mouth are visible great quantities of masts and spars, the remains of ancient wrecks. Mr. Lista has given it the name of Rio Roca, from the late President of this Republic. Between this and Cape St. Vincent are several other small rivers, generally with high bluffs on each bank, and very rapid currents. The most considerable of these he has named Rio Lista, after himself. Along a part of this stream is a rich valley, with most luxuriant grasses and fine timber. On the southern side of Tierra del Fuego there are no rivers, if we except a small stream which empties into Slogget's Bay, and another which empties into the Bay of Yandagaya, "a splendid bay, which reminds one of the fiords of Norway."

ZOOLOGY OF THE COUNTRY.

Of the animals native to the country the most important is the guanaco, found only in Onisin and the island of Navarino, the large fox (*stenomys*), and two species of ground-rats or moles. Of the amphibious animals there are two species of seal and two species of otter (*nutria*). Whales and various kinds of excellent fish abound along the coast and in the different channels. The rivers also contain fish. Mr. Brydges informs us that there are ninety kinds of birds, five of wild geese, four of ducks, and two of swans, besides the albatross, the penguin, the cormorant, the woodcock, the partridge, the pigeon, the snipe, and other species of smaller size. The fish-king, the parrot, and bee-martin also abound. The condor is sometimes seen, and there are two kinds of eagles, &c. There is not a great variety of insects. There are various mollusks, one species of which, called "danawa" by the natives is most delicious food, though one portion of it is said to be extremely poisonous. There are no snakes or reptiles in the country, and no beasts of prey. The dogs of the country are of a peculiar shaggy breed, but fleet and very strong; and to the people, in the protection of their huts and in the pursuit of game, are quite invaluable. Other domestic animals, such as horses, horned cattle, goats, cats, and all varieties of the feathered tribe, do well and readily accustom themselves to the change of domicile.

NATIVES OF TIERRA DEL FUEGO.

In regard to the natives of Tierra del Fuego, there have been so many contradictory statements made by various visitors to different parts of the country, that it is somewhat difficult to reconcile them. By some they are reported to be large, stalwart, and fine-looking men. By others they are said to be physically small and the most abject of human beings. Darwin, whose scientific investigations were confined principally to the southern portions of the country, states that "one can hardly believe them to be fellow-creatures and inhabitants of the same world," and he seems to have formed his idea of the "connecting link" from what he saw of them.* On the other hand, Señor Fredrico Mouglier, whose explorations were in the northern and northwestern parts of the island, informs us that "the Fuegians are powerful men of large stature and warlike instincts, living by the fruits of the chase, and having a kind of military organization under the command of one chief." Lieutenant Bové gives an equally favorable estimate of their appearance; while Captain Parker assures us that "they are beautiful specimens of the human race."

There seems to be no doubt that both of these contradictory stories are to some extent true, according to the part of the country which you may happen to visit. The fact is, the land is inhabited by two very distinct races of Indians; those who occupy the northern portions of the country being quite different in size, appearance, and manner of life from those who live along the channels and among the islands of the southern extremity. Mr. Brydges, who, from his long residence among these peoples, probably knows more about them than any other living man, not only assures us that there are two tribes, separate and distinct, but explains that the difference is the result of the great difference in their modes of life and the circumstances to which they respectively have had to adapt themselves, according to the localities in which they lived. Those who dwell in the north he calls Onas; those in the south, Yahgans; and he obtained these names from the tribes themselves.

THOSE WHO INHABIT THE NORTHERN PORTIONS, THE ONAS.

The Onas appear to be quite identical in customs, character, appearance, manner of living, and even in language, with the Tuehelche Indians of Patagonia. Like them they use bows and arrows in the chase after guanacos and for killing feathered game. They are very muscular people—large, active, and well formed. They speak of themselves as "footmen," to distinguish them from the Yahgans, who spend their time in canoes or in fishing. The number of the Onas is now quite reduced. Fitzroy estimated them to be about 600 souls. An epidemic of measles, a year or two ago, was very fatal, and the entire tribe does not now number more than 500 persons.

*Mr. Popper says in the National Library at Paris there is preserved a curious publication, consisting of a map entitled "*Tabula geographica regni Chile.*" It was designed in the seventeenth century by the Jesuit fathers of that country and exhibits in different parts of Patagonia drawings of Indians, of guanacos, and of ostriches; whereas over Tierra del Fuego is painted the figure of an Indian in the position of one hurling an arrow. The most remarkable thing in this drawing is that the hind part of the Indian is adorned with a strange prolongation of the backbone, with this inscription attached, "*Caudati homines hic*" ("Here are men with tails"); evidently the connecting link which Mr. Darwin was in search of in order to prove his theory.

They principally occupy the pampa region, from Anegada Point on the north to Thetis Bay and Admiralty Sound on the south. They are nomadic, and wander from one part of the country to another, according to the season or the exigencies of the chase. They carry their tents with them, as these merely consist of a few poles, generally covered with guanaco skins, or sometimes thatched with rushes. Abandoned encampments are to be seen all over the country, where hillsides or valleys afford protection from the winds. The men do the hunting, while the women do the heavy work and carry the burdens. Besides their bows, the strings of which are made from the sinews of the guanaco, the men are equipped with quivers made of skin, which are always filled with a full complement of heavy arrows, pointed with a sharp stone or piece of glass. Mr. Popper, whose recent explorations in Tierra del Fuego I have already referred to, has, in a lecture just delivered before the Argentine Geographical Society, given us so graphic a picture of the Onas Indians that I am induced to make a translation of it. He says:

The central portions of Tierra del Fuego are inhabited by a race of corpulent, strong, and muscular natives, whose height sometimes exceeds six feet. Their skin is of a clear, copper color, and is soft and oily to the touch. Their dark, lusterless, woolly hair falls in tufts around a large tonsure, cut close in the top of the head. The face is oval shaped, of an orthognate type, and exhibits a narrow forehead, adorned with frontal protuberances slightly accentuated. The forehead terminates in a pair of prominent and scarcely arched eyebrows, which give the eyes a deep and energetic expression. The cheek-bones are prominent; and the nose is convex and almost aquiline. The mouth is of medium size, with small teeth covered with a yellow enamel. There are a few hairs on the chin; and the ears, depressed and disjointed, complete a face which calls to mind the North American Indians rather than the Tuehelches on the other side of the straits. The head rests upon straight, strong, and broad shoulders, and a prominent, well-developed chest; whereas the breasts of the women are depressed, pendant, and flaccid, though I have seen some exceptions. The arms of the women are strong and round; those of the men are muscular. The bulky hands contain short fingers, which terminate in flat, square nails. The general gait of these Indians is heavy. The dimensions of the abdomen vary very much, according to the time at which he has taken his Fuegian meal. In the lower parts of the body nature has been less prodigal. The legs, although straight and strong, are not in proportion to the body; the calves are meager, terminating in ill-defined lines, and the feet are of moderate size. Notwithstanding the rough and severe climate which prevails, the inhabitants use no other clothing than a cloak or "poncho" of guanaco skins, and they generally live in tents, the sides of which are made of a couple of poles on the windy side, over which skins are stretched or grass is banked. The only decoration I observed on the women is a bracelet of perforated shells. It is quite impossible to distinguish the females from the males by their dress, though they exhibit but little modesty in exposing their persons. The Onas are extremely nimble. Being obliged to hunt the guanacos on foot, they acquire the habit of running with incredible swiftness. Through curiosity I measured the tracks left in the sand by an Indian who fled before us, and the length of each step was nearly two meters. The wounds which I have seen them inflict on themselves, and which perhaps are connected with some superstitious belief, denote strength of mind; and lead me to the conviction that these aborigines can, without much suffering, bear fatigue, cold, hunger, and every species of painful impression.

With regard to the intellectual faculties of the Onas, they cannot be much developed, if we may judge by the primitive implements they use in their every-day life. Their tools, for the most part, consist of pieces of iron, taken from some vessel cast on shore, wrapped up and tied to pieces of wood by leather thongs. For digging up the ground they use the shoulder-blade of the guanaco; and the only water-vessels they have are large marine shells, scallop or trumpet shaped. They have no canoes, nor do they devote themselves to fishing. They only pick up the fish cast on shore when the heavy tides run out. Some intellectual effort is remarked in the making of arrows and baskets. The former are beautifully finished and evenly pointed with sharpened stones or pieces of glass picked up on the shores. The baskets are made of rushes, which are so interwoven as to be at the same time strong and flexible. A cord made of guanaco sinew, placed across the opening of the basket, serves as a handle. To catch birds they use traps made of thin and

flexible whalebone, in the form of movable rings, which, being hidden in the grass, answer the same purpose as the well-known wooden trap for catching partridges and other game.

During the course of the expedition I tried to enter into friendly relations with the Onas whom I met, but, I am sorry to say, without any success. Instead of corresponding with our friendly relations and dispositions, they invariably showed an undisguised tendency to make war on us.

Other travelers confirm this warlike disposition of the Onas. On the approach of strangers to their shores they are inclined to be aggressive, and stories are told of their cruelty to sailors who have been shipwrecked on their coasts. The Argentine authorities and ships of war, owing to the want of welcome with which they have been received, have already had a number of rencounters with them, in some of which the Indians were shot down with Remingtons. I doubt not, however, these unfortunate affairs have been owing more to the timidity of the Argentines, who, in their awkward attempts to open communication with the natives, have precipitated hostilities in the apprehension that they were about to be attacked or led into ambush.

THE YAHGANS, OR SOUTHERN TRIBES.

The Yahgans, who inhabit the southern portions of Tierra del Fuego, are altogether a different people from the Onas. Perhaps with some reason they have been considered as "the most miserable specimens of humanity that can be found in the western hemisphere." Mr. Brydges, however, who has lived among them for nearly a quarter of a century, says they are not so degraded as they have been represented—not so black as they have been painted—and they are greatly improved in their condition since he went to live among them. The charge which has been made against them, that they are cannibals, he assures us is emphatically untrue. "Cannibalism is utterly impossible among them, for the reason," as he says, "that they look upon human life as sacred," and from this circumstance the friends of every person assassinated or killed believe that they are in honor bound to avenge his death. They do not eat meat which is not cooked. They do not marry with blood relatives, however remote. Some of the men have one wife; some have two or three; but they never marry first or second cousins, or near relatives, as something abominable. On the other hand they are very immoral and lax in their conduct and conversation, and their continual offenses against each other keep their communities in a chronic state of inquietude and violence. There are very few of them whose bodies do not present scars and wounds, and deaths frequently occur from their personal wrangles. They are quarrelsome and irritable, and in their dispositions they are both crafty and treacherous. Having no fixed principles they are governed entirely by their desires and passions. Tattooing is unknown, but the girls paint their faces for fashion and the men for mourning. They are fond of each others' company, and, sitting around the fires of their huts or wigwams, they are very jovial over their meals. When they have satisfied their hunger in the amplest manner—for they generally have an abundance of food—they indulge in the most animated conversation and in the most excessive demonstrations of joy. Their laughter is natural and hearty, but it is sometimes so excessive and boisterous as to drive a serious person quite frantic.

The Yahgans formerly numbered about 3,000 souls, but small-pox and other epidemics have of late years been very fatal among them,

and their numbers are now considerably reduced. They live usually in groups or villages of twenty or thirty families. They are not of a uniform type. While some are quite stalwart, others are exceedingly diminutive. Some have straight hair; others have it curled and crispy. Their principal food consists of mollusks, fish, sea-calves, birds, strawberries, &c. They manufacture fishing nets from tendons, with a mesh quite identical with those manufactured from hemp in the United States. They seem to understand the division of labor. The women cook, fish, and paddle the canoes, while the men hunt, make and repair the canoes, and collect fuel. The women are exceedingly expert with the canoes, and are much more fearless swimmers than the men. They paddle along the coasts for hundreds of miles in their canoes. The principle of women's rights is so far respected that the wife disposes, as she wishes, of whatever fish she may catch over and above what is required for her wigwam. They fully understand the art of cooking, though in rather a primitive way. On this subject Mr. Brydges says:

These Fuegians are well acquainted with the various uses of fire, and cook their fish, birds, meat, and eggs in different ways, but until I went to live among them they never boiled them in water, simply because they had no vessels in which they could do so. They toasted whale or seal blubber on pointed sticks stuck in the ground, and caught the oil in large mussel-shells placed underneath. As these filled they poured the oil into bladders and pipes for future use. Fish-fat they put into large shells and caused the oil to flow from it by placing heated shells upon it. When they wished to cook birds whole they placed them on the burned-out embers and filled them inside with heated stones. They baked their eggs by breaking a small hole in one end and placing them upright in the embers before the fire, turning them around from time to time to make them cook equally. They uniformly used the blood of animals, but always in a cooked state. I have never seen or heard of the Yahgans eating any kind of meat or fish raw, excepting certain kinds of limpets, which they much prefer in an unckooked state. Although until I came they had no vessels in which to heat water on the fire, I have heard occasionally of their having heated water by dropping heated stones in it as it stood in bark or wooden buckets. While they do not cook their vegetable food, they thaw and slightly warm, in winter, the frozen tree parasitic fungi before eating them.

THEIR WONDERFUL LANGUAGE.

Mr. Brydges gives many more interesting details than those which I have quoted or condensed above in reference to these people. But the most remarkable one is his statement that the language of the Yahgans is "soft, rich, and very full;" how rich and how full may be inferred from his almost incredible announcement that he has accumulated a dictionary or vocabulary of no less than thirty thousand words of the dialect spoken by the Indians in those distant regions. Lieutenant Bové, who probably got his information in regard to the language of the Yahgans from Mr. Brydges, makes a similar statement, and in his narrative adds that "the words are sweet, pleasant, and full of vowels." As they neither read nor wrote in their primitive condition, one might be disposed to ask what in the world is the use to them of so many words, since among such an uncivilized people a few hundred would seem to be sufficient for the limited number of their ideas, or the limited purposes of life to which they could apply them. But it may be that their language is all that is left to them of a former civilization.* Mr. Brydges states that he now speaks

*In the Nineteenth Century for January, 1885, will be found an article on the Fuegians by the great scientist, Max Müller, in which he writes as follows in regard to the remarkable language of that people:

"Nothing can be more interesting than the study of races who have no literature, but whose former history may be read in their languages and their tools, and whose present state of civilization or savagery may certainly be used to throw collateral

the dialect of these people with the same facility that he speaks the English language.

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light on many phases in the history of more highly civilized nations. Only let us remember that these races and their languages are as old as the most civilized races and their languages, while their history, if we may so call it, seldom carries us back beyond the mere surface of the day. If we in England are old, the Fuegians are not a day younger.

"But while scientific anthropologists have long given up the idea that if we want to know the condition of primitive man we must study it among the Fuegians, the subject has lost none of its charms. The first question which we have to ask when we have to speak of savages is whether there is any indication of their having once reached a higher stage from which they have descended. Most people would naturally think of Fuegians and Hottentots as retrogressive or decaying savages, because they are dying out wherever they are brought in contact with European civilization. But we must be careful before we deny the recuperative power even of retrogressive savages, and must look for some evidence beyond mere statistics.

"As I look upon language as a work of human art, I must confess that nothing has surprised me so much as the high art displayed in the languages of so-called savages. I know quite well that a great abundance of grammatical forms, such as we find in these savage dialects, is by no means a proof of high intellectual development. But if we consider how small is the number of words and ideas in the ordinary vocabulary of an English peasant, and if we find that one dialect of the Fuegians, the Yahgan, consists of about 80,000 words (as Giacomo Bové states in his Travels, 1881), we certainly hesitate before venturing to classify the possessors of so vast an inherited wealth as the descendants of poor savages, more savage than themselves. Such facts cannot be argued away or ignored in our estimate of the antecedents of the Fuegian race.

"I select the Fuegians as a crucial test simply because Darwin selected them as the strongest proof of his own theory, and placed them almost below the level reached by the most intelligent animals. When Darwin looked at the Fuegians he no doubt saw what he tells us, but then he saw it with Darwinian eyes; he says: 'Viewing such men one can hardly believe that they are fellow-creatures and inhabitants of the same world. Their language scarcely deserves to be called articulate—a mixture of hoarse, guttural, and clicking sounds.'

"With regard to their physical aspect Darwin must have been either very unlucky in the Fuegians whom he met, or he cannot have kept himself quite free from prejudice. Captain Parker Snow, in his Cruise of Tierra del Fuego (London, 1857), speaks of them as really beautiful representatives of the human race. Professor Virchow, when exhibiting a number of Fuegians at Berlin, strongly protested against considering them as an inferior race or a connecting link between ape and man. And as for Darwin's estimate of their language, I doubt whether, so far as sound is concerned, any one would consider Fuegian as inferior to English. Lieutenant Bové, speaking of the Yahgan dialect, says, 'the words are sweet, pleasant, and full of vowels,' but he admits that some of the other dialects are harsher.

"Even if their language was as guttural as some of the Swiss dialects, how shall we account for the wealth of their vocabulary? Every concept embodied in their language is the result of hard intellectual labor, and although excessive wealth may be an embarrassment, there remains enough to prove a past very different from the present. The workman must have been as great as his work; and if the ruins of Central America tell us of architects greater than any that country could produce at present, the magnificent ruins in the dialects of Fuegians or Mohawks tell us of mental builders whom no one could match at present.

"The Duke of Argyll, in examining the principal races commonly called savage, points out that degraded races generally inhabit extreme ends of the continents, or countries almost unfit for human habitation. He concludes that they did not go there of their own free will, but that they represent conquered races, exiles, or criminals. He considers that the Fuegians probably came from the north; that their ancestors may have participated in the early civilization of Chili, Peru, Brazil, or Mexico; and that the wretchedness of their present home fully accounts for their degradation.

"Wherever we look we can see the rise and fall of the human race. We can see it with our own eyes in some of our oldest and noblest families. We can read it in history if we compare ancient with modern Greece. The idea that the Fuegian was salted and preserved for us during many thousands of years, so that we might study in him the original type of man, is nothing but a poetical sentiment, unsupported by fact, analogy, or reason. One thing is quite certain, that the private diary of the first man will never be discovered, least of all at Cape Horn."

THEIR PRESENT IMPROVED CONDITION.

During the many years, however, that Mr. Brydges has been among these Indians very great changes have taken place in their social and intellectual status. Mr. Darwin himself would scarcely recognize them as the same people. Those who have, during the last twenty-five years, come in contact with Mr. Brydges, and by him been brought into relations with the South American Missionary Society of London, are no longer "the abject specimens of humanity" that Darwin described. Mr. Brydges assures us that some of them are now quite civilized; that "they have learned to read and write, and above all fear God and keep His commandments." His place of residence is at Ushvia, on the north shore of Beagle Channel, where he has a wife and six children, and where his missionary labors for all these years have been active and continuous. He says of himself:*

I have never been alone among the natives, as there have always been associated with me one or more fellow-workers with their families. Our life among the Yahgans has been eminently practical, with the view of leading them to cultivate the soil, keep cattle, build permanent huts, and live in a more orderly and settled manner. I began to learn the native language in 1858, joined the mission service in 1861, and could converse freely with the Indians in 1863, when, in company with Bishop Sterling, I fixed my residence among them. The improvement which has taken place in their condition since is wonderful. They have now learned the arts of civilized life. They have acquired the skillful use of fire-arms and some of them are splendid sportsmen. They own guns and purchase ammunition. They are acquainted with the value and use of money, English or Argentine, a good sum of which is continually passing through their hands, as they prefer selling for money rather than bartering. They occasionally visit Sandy Point and the Falkland Islands, and are thus thrown in direct contact with a civilization which they are anxious to attain to. My object in coming to Buenos Ayres has been to obtain a grant of land in the Beagle Channel, on which to create a farm and employ native labor upon it, thus seeking to supply a want in reference to agricultural products, which we have long felt, and at the same time insure the well-being of some of the natives.

As may readily be supposed, the Argentine Congress, at its late session, was not long in deciding to donate to Mr. Brydges twenty-four square miles of land at Ushvia, fronting on Beagle Channel.

A very interesting fact, illustrating the labors of Mr. Brydges among the Yahgan Indians, is related by Mr. Lista. During his explorations he met a body of these natives on the eastern coast, and they addressed him in the English language!

TIERRA DEL FUEGO AS IT REALLY IS.

Such is Tierra del Fuego,† or at least that part of it which belongs to the Argentine Republic; not altogether the miserable "tail end of creation" which some explorers in their ignorance have painted it, but a country diversified and picturesque in the extreme, with a beautiful alternation of mountain, upland, and plain, with immense forests of several varieties of valuable timber, with wide pampas and extended plains, with a variety of succulent grasses suitable for both cattle and sheep, with a large number of small rivers and water-

*Published in the Buenos Ayres Standard.

†My report has special reference in great part to that portion of Tierra del Fuego which belongs to the Argentine Republic and lies along the Atlantic Ocean. Since its completion, however, Mr. Julius Scheltze, a mining engineer, who has just returned from an extended survey of the western parts of the Fuegean archipelago, has furnished me with a very interesting letter on the characteristics of that portion of the Magellan land. I attach it as an appendix to this report.

courses running to the four points of the compass, with lakes and lagoons in different parts of the interior, with a large number of beautiful bays and harbors, with various kinds of wild animals valuable for their flesh and their furs, with an abundance of excellent game, with a climate somewhat rigorous in the winter, but healthful in the extreme and suitable for the cultivation of the cereals and nearly all varieties of vegetables; a country, indeed, which is capable of wonderful development and possessing quite all the elements necessary for sustaining a large population. There is no country which has been so persistently maligned and misrepresented, and simply because those who visited its coasts never penetrated into its interior, but drew their conclusions from what they saw, or imagined they saw, from their ships.

THE VEIL PARTIALLY LIFTED.

Fortunately, the explorations which have been made during the last year or two have quite lifted the veil from the fastnesses of the interior, and revealed—though only partially as yet—what has heretofore been so densely shrouded in mystery and gloom. Mr. Popper, who, as I have said, has just finished an exploration entirely across the country, from Useless Bay on the west to San Sebastian Bay on the Atlantic, in an interesting diary of his travels,* speaks of the future which is in store for the gold mines in the region of the Sierra Balmiceda, and of the "beautiful plains" and "good pasture lands" which he found on the Argentine side of the island. While on the Cullen River he found himself in the midst of "an elevated plain covered with grass, well fitted for sheep, with not a single bush to be seen on the horizon." Of the forests in the mountain region, he says:

> At every step the vegetation became more and more rank and luxuriant, increasing in height and density until we were obliged to come to a standstill. Before us was the forest like a solid wall. Without any kind of outlet or opening it surrounded us on all sides, so that at certain times we could neither advance nor go back. It was a gloomy forest. The ground was covered with the rooted up and fallen trunks of trees, and masses of humid and decomposing vegetable matter.

On reaching the heights of Sierra Balmiceda through a series of almost insurmountable obstacles, he says:

> The splendid panorama spread out before us, and of which these heights commanded a view, fully recompensed us for our labor. Towards the west, opening like a geographical map, appeared Cape Monmouth, with its lagunas forming icicles of most fantastic shapes, and the Straits of Magellan, whose vaporous atmosphere scarcely allowed a glimpse of the continental coast; to the southwest was the island of Dawson with its dense evergreen forests; towards the south was the White Mountain range, overlooking the Beagle Channel; and far away, breaking off in the horizon, were the mountains of Sarmiento and Darwin, which, like gigantic sentinels of the Atlantic, raise their heads, covered with eternal snows, far beyond the region of tempests.

Of the wild game of the country he speaks in most rapturous terms. I again quote from his diary:

> We are on the banks of the river Beta. We remark a fire made by the Indians two leagues to the westward. The valley crossed by the stream produces some bramble bushes of the *Berberis oxifolia*, and offers excellent pasture. We are surprised at the abundance of game. At about four kilometers from the mouth we start up a guanaco, which our dogs have no difficulty in catching. As we approach our encampment we scare up a covey of the *Chloefaga magellanica* with its young

*Just published in the Southern Cross of Buenos Ayres. His report is not yet printed.

searching for worms in the grass; there go a pair of ducks (*Anas cristata*) gliding along the limpid surface of the stream and followed by a new generation of their own species. On all sides there are flocks of birds of all sizes and colors. On descending the valley we remark great animation among its inhabitants. A multitude of ducks and other birds arise with a sharp scream and incessant flapping of the wings. They fly in circles over our heads, and sometimes they come so near us that they touch our caps with the tips of their wings. In the mean time we are occupied in catching young pigeons as they try to hide themselves in the burrows. We pick up eighteen pigeons, while *la canardière* secures three geese and eight ducks, &c.

MR. LISTA'S ESTIMATE.

Mr. Ramon Lista is even more emphatic in his estimate of the Argentine portion of Tierra del Fuego. From his report to the Government, now just published,* I translate as follows:

I have traveled from one extremity of the country to the other, and I am scarcely able to give entire credit to all that my astonished eyes have seen. I expected to find a cold and chaotic island, a barren rock, "the ruin of a former world," as Captain Wallis has called it. Instead of this, I have bivouacked continuously on a flowery plain of grasses capable of sustaining thousands of cattle and sheep. I have discovered leagues upon leagues of rich valleys, accessible mountains almost without snow, and magnificent forests where fern trees and other plants are found which in Buenos Ayres are not able to live, except under the shelter of a greenhouse.

I have traveled much; I have seen the forests and cataracts of the northern Misiones; I have crossed the pampas from Carhué to Choyque-Mahuida, and I have explored almost all of Patagonia; but nowhere have I experienced such profound emotions from the contemplation of natural scenery as in Tierra del Fuego. The sublime landscapes—almost tropical—of its evergreen forests, the mildness of its climate, and the rich pasturage of its virgin prairies completely refute the stories which in all ages and among all peoples have been circulated by its calumniators. As all the great navigators who have explored its coasts—Magellan, Sarmiento, Cook, Byron, King, Fitzroy, and others, ancient and modern—have painted Tierra del Fuego in the most somber colors, perhaps my words may seem bold and insolent, or the offspring of a prejudiced enthusiasm; but then the interior of the island, which I have had the fortune to explore, was entirely veiled to all those illustrious navigators.

The appearance of this *terra incognita* is most beautiful; something like that of Norway, and not a little like that of Switzerland; and if it is not an Eden or an Eldorado, it is none the less rich and fertile. In its grassy valleys and in its dense and wide-extended thickets of juicy shrubs and plants we can see a revelation of its future pastoral riches. Its marine climate is tempered by the winds which blow from the north during the winter; and when up the tortuous valleys of verdant grasses the traveler reaches the boundary of the great forests, he cannot fail to enter his protest against the calumnious epithets which during all these years have been directed against a country in whose solitudes live thousands of human beings, fed and clothed entirely by the prodigality of nature.

I could translate from Mr. Lista's report many more pages in the same strain of appreciation of the Argentine portion of Tierra del Fuego, but this is sufficient to convince any one that in spite of the maledictions which have from time immemorial been persistently heaped upon the country, there are large portions of it on the Atlantic side which must ultimately attract the attention of the civilized world, not merely for the mineral wealth which it contains, but likewise for the pastoral industry which it could support.

SETTLEMENTS.

Certainly, however, the fates have as yet not been propitious to Tierra del Fuego. Thus far there has not been any development of that far southern land by way of colonization or settlement. It is still in almost the same state of unsubdued nature that Magellan found it.

* "Viaje al Pais de los Onas, Tierra del Fuego, par Ramon Lista, miembro de la Academia de Ciencias, &c. Buenos Ayres, 1887." pp. 39 and 40.

The only existing settlement anywhere in the vicinity of Tierra del Fuego is on the northern side of the Straits of Magellan, at Sandy Point (Punta Arenas), whose geographical position is important, whose climate is genial, and whose commerce and industries, already considerable, have great future promise. The place was founded in 1843 by the Chilian Government as a convict colony or penal station. It is in charge of a governor and other proper officials, who hold their appointment from the Chilian Government. A few years ago the convicts overpowered their guards and escaped, destroying a large part of the town. They then made their way through Patagonia to Chupat, on the Atlantic coast, where they were captured, brought to Buenos Ayres, and afterwards returned to Chili. Since then, I believe, that Government no longer uses the place as a station for its convicts. To-day the town numbers about 2,000 inhabitants, belonging to all nationalities. It forms a central point for furnishing supplies for the vessels which annually sail on the southern coasts of Tierra del Fuego in search of seals and guano, as also for the gold miners who are at work on either side of the straits. It likewise furnishes a market as well as nucleus for the pastoral interests, which now have attained to considerable proportions along the northern shores of the Straits of Magellan. It is estimated that there are already two hundred thousand sheep between the Gallegos River and Sandy Point, the pasturage being of a very good quality. Two lines of steamers, one the German Lloyds and the other the Liverpool and Pacific line, now make regular semi-monthly trips through the straits, touching at Sandy Point on their passage each way. It is also becoming quite a coaling station for war and other steamers, coal of a very fine quality having been found in the vicinity. This coal is also, to some extent, now sold in Buenos Ayres. Cargoes of beech timber are also finding their way to this market. The port has a fine anchorage and a convenient mole for the shipping. The mixed population, in its love of conviviality and amusements, in its propensity to gamble, and in its carelessness of the future, quite reminds one of the very early days of our own San Francisco.

USHVIA, THE CAPITAL OF TIERRA DEL FUEGO.

In Tierra del Fuego the only point which can be called a settlement is Ushvia, the site of the missionary station of the Rev. Mr. Brydges. It consists now of several families, teachers, &c., connected with the mission. For that purpose several houses have already been erected, and several more are in process of construction. The embryo town is on a beautiful bay, looking off towards the somber forests of Novarino. In the rear it is protected by forests which line the mountain sides. The shores are gently sloping and covered with a rich carpet of grass. At different points beautiful streams pour down the slopes, sometimes forming cascades and sometimes leaping over high precipices. In this charming location the English mission has, for the last twenty-five years, been furnishing food and clothing and religious instruction to hundreds and hundreds of native Indians. Already a large clearing has been made in the forests, and the place now not only has its vegetable-gardens and orchards, but handsome pleasure-grounds, where bloom myrtle, and fuchsias, and magnolias, and violets, &c., with many choice varieties of plants and shrubs.

In 1884 the Argentine Government organized the Territory of Tierra del Fuego, "bounded on the north by the Straits of Magellan, on the east by the Atlantic Ocean, on the south by the Atlantic Ocean, and on the west by the Chilian boundary under the treaty of

1881, and including States Island," and the capital of the territory has been fixed at Ushvia, but occupying the opposite side of the bay. Several buildings for the use of the governor and his officers have already been erected, as also barracks for the quarters of a military guard. One or two Argentine men-of-war are nearly always at anchor in the bay.*

OTHER SETTLEMENTS, ETC.

Besides this there are a few settlements in Future and Useless Bays, the quarters of the gold miners who are working there, and on the river Santa Maria and other streams which come down from the mountains.

Some years ago, Mr. Steubenrauch, the British consul at Sandy Point, attracted by the beautiful plains of Gente Grande Bay, resolved to establish a sheep farm there; and he has not only built some houses, but has reclaimed a large *estancia* with wire fences, and stocked it with sheep brought from the Falkland Islands, placing a missionary from those islands in charge of the place. At last accounts it was progressing favorably.

A number of miners have been arranging to go to San Sebastian Bay in the prospect of being able to find gold in paying quantities near that point.

On States Island there are a number of perfectly sheltered bays, and there is now the nucleus of a settlement there, a light having been erected fronting on the Straits of Lemaire.

ARGENTINE MOVEMENTS TO DEVELOP THE COUNTRY.

In concluding this report it is gratifying to be able to state that there is a prospect of a brighter future in store for Tierra del Fuego. The narratives of Mr. Lista and Mr. Popper, and the statements of Mr. Brydges, have brought that country to the front in so favorable a light that the Argentine Government is determined to make a movement at once for its colonization and development. To this end Governor Paz, the recently appointed governor of Tierra del Fuego, is now in this city arranging for a thorough exploration of the most available points for settlement, and will direct his attention not merely to an investigation of the mineral resources of the country, but to an examination of the pasture lands with a view to opening cattle and sheep *estancias* there. A full corps of competent men will accompany him and assist him in his labors. The Argentine national steamer Magellanes, loaded with supplies and the necessary outfit, will sail in a few days from this port with the expedition on board, and the work is expected to commence so soon as the spring opens. I have every reason to believe that it will be the date of a new departure for that hitherto unknown and much misrepresented portion of South America.

E. L. BAKER,
Consul.

UNITED STATES CONSULATE,
Buenos Ayres, June 3, 1887.

*Mr. Lista suggests that the capital or "prefectura" of Tierra del Fuego be removed by the Argentine Government from Ushvia to the Bay of Good Success, which offers both shelter and a good anchorage for vessels, while it is only seven miles distant from Cape San Diego and twenty miles from States Island. It would thus afford great service to the hundreds of vessels of all flags which annually pass through the Straits of Lemaire. The change will probably be made and a light-house erected there.

[*Appendix to Consul Baker's report.*]

CHILIAN TIERRA DEL FUEGO.

BUENOS AYRES, *May* 28, 1887.

DEAR SIR: Learning that you have just returned from an extended mining survey of the western or Chilian portion of Tierra del Fuego and the adjacent islands, I should be pleased, if convenient, to have you give me a description of the natural characteristics of that locality, with its resources and possible development.

Very truly,

E. L. BAKER, *Consul.*

MR. JULIUS SCHELTZE,
Mining Engineer.

THE MINING COUNTRY OF THE FUTURE.

BUENOS AYRES, *June* 6, 1887.

DEAR SIR: In reply to your note of inquiry, I have to inform you that in my opinion the lands which lie along the western portion of the Straits of Magellan, with the adjacent islands, constitute the great mining country of the future.

APPEARANCE OF THE COUNTRY.

In regard to the characteristics of that portion of South America, I may premise by saying that they are exceedingly different from those which pertain to the eastern extremity of Patagonia. The Chilian settlement of Punta Arenas is situated on the Straits of Magellan, about midway between the Atlantic and Pacific Oceans. While the country to the east of this center of civilization (though an exceedingly rough one) of the far south of the continent consists of the open, treeless pampa, with scarcely 900 feet elevation, the aspect of both sides of the straits, west and southward of this turning point, changes suddenly into a very mountainous country, with a great abundance of extremely luxuriant forests. There is, in fact, so far as I could see or learn, but one little plain that might serve for pastoral purposes, and that is the northern part of the island of Dawson, between the peninsula of Brunswick and the island of Fireland (Tierra del Fuego); while the southern portion of the island of Dawson at once becomes very mountainous and in the sheltered places is covered with forests, like the surrounding islands and continent.

MOUNT SARMIENTO.

Mount Sarmiento, in a straight line, is 80 miles south from Punta Arenas. It stands on the western peninsula of Fireland, and forms the great culminating point of this frequently interrupted mountain chain of the Cordilleras. The two white poodle peaks of its summit have an elevation of about 7,000 feet, and in clear weather can be seen at a distance of 100 miles. They rise high and lofty above the surrounding heights, which generally do not exceed 4,000 feet, while the western slope of this huge mountain center slides gradually but directly into the dark blue waters of the channel which separates Fireland from the other islands.

THE ISLANDS AND CHANNELS.

These islands are innumerable and of all conceivable shapes and sizes. All of them are of an extremely mountainous and rocky character, mostly of slate, diorite, and quartz. They are separated from each other by very deep channels which are connecte with the Pacific Ocean. These channels have innumerable inlets which penetrate into the interior of the islands, thus forming an immense number of far-reaching fiords, where the shores rise abruptly out of the water, very often forming a vertical wall, but generally ascending with an inclination of 45 to 60 degrees and culminating in eternally snow-covered peaks, three to four thousand feet high. Very frequently immense glaciers descend from the higher regions to the water's edge, the warmer temperature of the water causing the lower strata of ice to melt and break away.

THE IMMENSE FORESTS.

Where the condition of the ground allows it, that is, where the soil is not too rocky, there is a most luxuriant growth of moss-covered trees, and higher up of shrubs. The wildest imagination can scarcely conceive of its denseness. Especially in the lower places and valleys, where the débris of the mountains, by the action of snow, rain, and atmosphere, is transformed into an apparently very fertile soil, the forests are impenetrable and exceed anything I have yet seen. Even the jungles of India and the virgin forests of Guiana and the United States of Colombia do not compare with the marvelous growth of the woods in this cold climate. Higher up on the mountains the trees, instead of growing straight up, crawl on the ground, so that a tree of the thickness of a man's body is not more than three feet high, but spreads out and covers with its branches a large tract of ground. I think this is especially due to the enormous weight of the snow, which accumulates on the tops of the trees during the greater part of the year and presses them down, but at the same time giving them warmth enough not to impede their growing. There is always, of course, the greatest abundance of water pouring down the sides of these island mountains, and many magnificent cascades are everywhere to be seen. In some parts the mountains recede a little and give space to rivers and their valleys, which generally extend a good distance into the interior. Many of these rivers contain water enough for small boats, thus allowing the exploration of the interior in that manner. Indian canoes are frequently seen upon them, during their deer hunts, and they very daringly cross from one island to another in these frail boats.

BIRDS AND ANIMALS.

I found the same specimens of birds and animals that are to be seen on the eastern side of the Cordilleras, with the exception of the guanaco, which I missed entirely. The waters of the channels are alive with fish, from the largest whale to the smallest specimens of the tribe; and the shores are very well populated with oysters and other mollusks. There is a curious circumstance I found out in regard to the oyster. When I found them on the sandy places there was nothing extraordinary about them; but I discovered a great bed of them on the diorite rocks with quartz veins of iron and copper, and in every instance, without exception, the shells contained great quantities of small pearls, becoming larger where the water was deeper. It is not improbable, therefore, that large-sized pearls might thus be found at a reasonable depth.

THE NATIVE INDIANS.

This country is inhabited by Indians of a low grade. They wander in their canoes from shore to shore, living upon oysters and other shell-fish, or hunting deer with their numerous dogs high up the streams in the interior. They are naturally very harmless and inoffensive; but the seal hunters from Punta Arenas, the most heterogeneous and roughest lot of people to be found anywhere, in their frequent visits to these places, have so abused and maltreated the natives, killing the men and outraging the women, that the Indians not unfrequently make reprisals upon them. By these means the Indians have gotten the name of being treacherous. I can only say that they never annoyed me during my stay, though they must have been perfectly well aware of our presence and small number. We were only five in all, and only one or two of us could guard the camp, while the others were prospecting far away and only returning at nightfall. We often heard their hunting dogs barking close to us, and they answered our "smoke signs" on the other side of the channel, but they never tried to take advantage of their numbers, and left us in peace.

The natives are almost nude, their only garment being a skin about a foot and a half square, on the shoulders. Otherwise they have no cover at all for their bodies. When on shore they live in egg-shaped huts, made out of the branches of trees, with an opening on each side, which they close up with old skins. Their boats are made out of large oak trees, which abound in this country, the pieces being put together in some primitive manner. Wherever they go in these boats, they carry their fire with them; and they have their huts built everywhere along the whole coast, and on the banks of the rivers, having only to cover them with their old skins to be at home. Their weapons consist of spears, and bows and arrows, the latter pointed generally with pieces of glass or iron taken from shipwrecked vessels.

THE CLIMATE.

With regard to the climate of these far western shores, it must be said that it is a very wet one. In the summer time, off the peninsula of Brunswick, there is hardly a day without rain. It generally comes over in continual squalls from the southwest or south, which, passing down the mountain gorges and valleys, are

stopped by the mountains, and then fall in torrents. Thus the streams frequently swell with great rapidity; so that it is not without danger to follow up the course of a river without a boat. This rapid filling of the rivers and rivulets with such a tremendous force of water will be one of the hindrances to surface-gold washing in this country, although I am sure there will be some pretty rich placers found yet.

THE VAST MINERAL RESOURCES.

I found gold in limited quantities in almost every creek and river in which I prospected; and with better weather conditions it might be made to pay to work them; but, as I have already said, the great future of this country will be found in the numerous mineral veins and coal deposits which exist on this side of the Cordilleras. Until I made my last expedition nobody had ever taken the trouble to ascend the hills or the streams, except for the purpose of looking for gold washings. But my last prospectings around Cape Forward gave unmistakable evidences of the greatest abundance of minerals—especially silver, copper, lead, antimony, and bismuth. The existence of coal was proved long ago, but thus far the coal is pretty much from the surface, and is too young to be of first quality. There certainly is better coal, but those who are at present engaged in this business are too inexperienced to know where and how to reach it. The proximity of water everywhere will, in the future, be a great help for mining purposes, by giving access to all places and reducing the cost of freight on the ores, machinery, and supplies to a very low figure compared with such expenses in other mining countries. Besides this, the great abundance of good timber close at hand, and the valuable water-powers which can be easily utilized everywhere around these places, are matters of weighty consideration and of high importance for the mining industry.

RICH SILVER AND COPPER VEINS.

The recent discovery of gold diggings on the Atlantic side of the straits for a time gave some impulse to the laziness of the people of Punta Arenas, and made them at least turn their eyes to their own ground. They started several expeditions on horseback and by sea into the Cordilleras; but they made the mistake only to look for gold diggings. Not one of the men was an experienced miner; and they therefore went unprovided with the necessary tools for the prospecting of veins. But even thus, a good many (apparently worthless) stones were brought back by them. Upon inspection, however, I have found them to be rich in silver and copper. Indeed, they are very much like the specimens which I have found in two different veins and which contain both those minerals in paying quantities. I am perfectly sure, from some of the samples I saw in Punta Arenas, that the veins from which they come will stand comparison with some of the best silver and copper veins in Northern Chili. But the people of Punta Arenas are not experienced in this kind of work yet; and it may be some time before they realize the fact that they live in a country which is equal, if not superior, in mineral richness to any mining district that I know of; and I repeat what I said in the beginning, that the lands which lie along the western portion of the Straits of Magellan is the mining country of the future.

Yours, truly

JULIUS SCHELTZE.

E. L. BAKER, Esq.,
United States Consul.

Since closing this report in reference to Tierra del Fuego, I have received from the maritime prefect or captain of the port of Buenos Ayres the following very important official intelligence in regard to that land, and which should be generally understood by those navigating in those waters:

[Translation.]

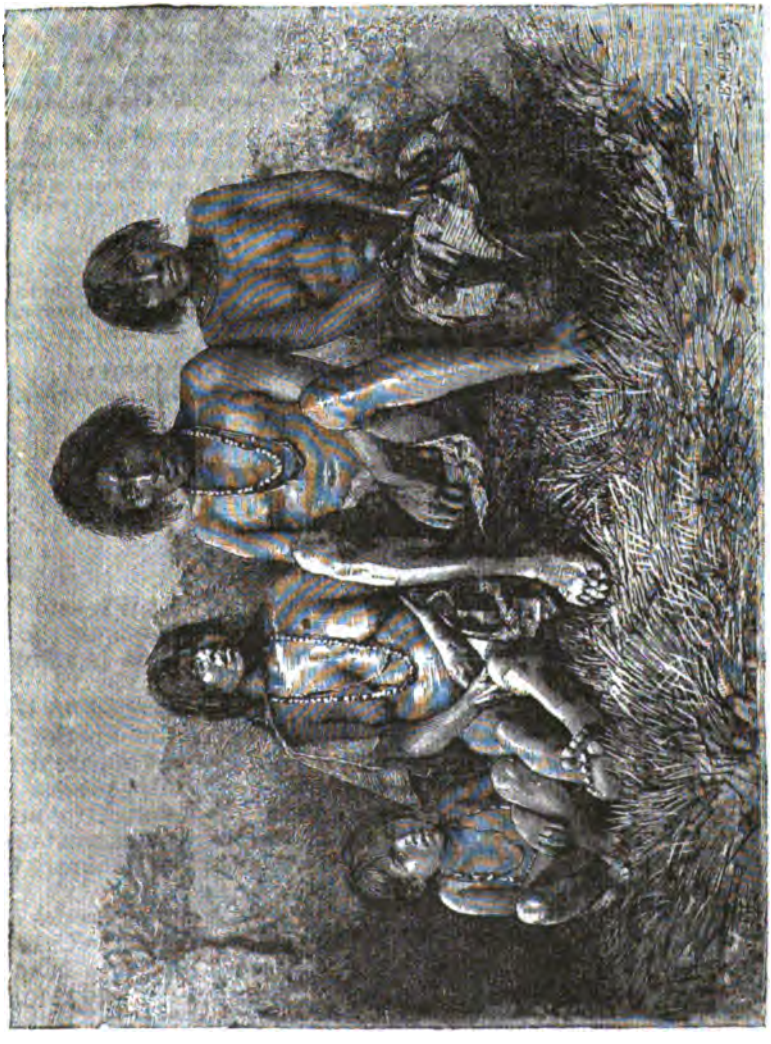
NOTICE TO NAVIGATORS.*

MARITIME PREFECTURE,
Buenos Ayres.

In the Bay of Ushoia (Beagle Channel) there exists an Argentine subprefecture of the port, with a sufficient staff and the necessary elements for rendering aid to vessels which may need it, and also assist such shipwrecked seamen as may be cast upon those coasts.

* This notice has been sent by order of the Argentine Government to all its consuls abroad, to be distributed gratuitously to such captains as may be sailing towards this country.

YAHGAN INDIANS—CAPE SAN DIEGO.



FAMILY OF ONAS INDIANS.

Near to this subprefecture, about eighteen years ago, an English mission was established among the tribe of Fuegean Indians called Yahgans. These Indians are now almost all of them civilized; their character is of the very best, and to some extent they speak the English language.

Navigators, therefore, need have no fear of these people. They can safely make signals to them, or approach them and disembark on the coast, perfectly sure of being well received by the Indians, and even assisted and humanely treated, whether it be in dividing their provisions with them or in showing them the best and surest route for finding the subprefecture, or the English mission, distant from it only a few hundred yards.

These Indians are the best assistants that the subprefecture possesses.

Many ship wrecked sailors of England and other nationalities have been saved, sheltered, and assisted by the Argentine subprefectures, established on States Island and in Tierra del Fuego (Beagle Channel). Very soon the last-named station will be transferred to the Bay of Good Success, where its services will be able to be more prompt and more efficient.

On States Island there is a light-house, situated in latitude 54° 48′ 24″ south, and in longitude 63° 47′ 1″ west from Greenwich, lighting a sector of 94°, which is comprehended between Cape Fourman (which bears north 53°, west from the light) and the sharp-pointed hill on Cape St. John (which bears north 41°, east from the light), and which is visible for a distance of fourteen or fifteen miles.

This maritime prefecture, under authority from the National Government, has deemed it proper and necessary to make this publication, in view of the fact that some shipwrecked captains, rescued by the authorities there, have declared that they were deterred from approaching the shore through fear of the Indians who live there.

Navigators may, therefore, dismiss all fear, and approach and land on those Argentine coasts, where they will always find gracious hospitality.

CARLOS A. MANSILLA,
Maritime Prefect.

BUENOS AYRES, *April*, 1887.

MEXICAN TOBACCO.

REPORT OF CONSUL MACKEY.

The tobacco of Mexico is of such excellent quality that it is said by many to equal that of Cuba, and there is no doubt among those acquainted with Mexican tobacco that such a comparison is admissible.

The best cigars of Vera Cruz and Tabasco are not excelled by the best of Havana in form and flavor. Perhaps, however, the superiority of the leaf from the celebrated "Vuelta Abajo" is most apparent in that exquisite aroma which the tobacco of no other country possesses, and which, to the senses of the smoker, is the most delightful and ravishing of perfumes. On the other hand, the Mexican cigars burn much more freely than those of Cuba, which must be constantly in the mouth of the smoker or they become extinguished.

The manufacture of tobacco in Mexico into cigars and cigarettes of a fine quality is of comparatively recent origin, dating from the Cuban insurrection of 1868, when a number of refugees from that island landed in Vera Cruz and there established factories for the manufacture of cigars and cigarettes of the tobacco of the country. Since that time factories have been established in all parts of tho Republic where tobacco is produced, and the tobacco industry now furnishes employment for many laborers and skilled workmen.

Vera Cruz in 1886 contained four important factories for the manufacture of tobacco, "La Union," "La Especial," "La Prueba," and "La Nacional," besides various establishments on a smaller scale. These four factories employ among them more than a thousand workmen.

In San Andres-Tuxtla there are ten factories of the first order, three in Jalapa, and many in Orizaba, Puebla, San Luis Potosi, the city of Mexico, and elsewhere. The factories produce cigars of all qualities, ranging in price from $20 to $200 per thousand. Cigars are manufactured of every size and every shade, and great ingenuity and taste are displayed in devices of shape and ornament to attract the eye of the smoker.

In the cultivation of tobacco increased care and intelligence bestowed on each succeeding crop are augmenting greatly the production and improving the quality of the leaf, while better methods of packing, selection, and distribution in classes are observed in its preparation for market.

A disregard for these last particulars has diminished the acceptability of Mexican tobacco abroad, as much tobacco was formerly exported from Vera Cruz in the condition in which it would arrive from different places of the interior, the good and bad packed together indiscriminately without regard to quality. This was especially the case with commercial houses making shipments of tobacco for the purpose of placing funds in Europe to greater advantage, and to avoid the heavy loss by exchange. The houses of Vera Cruz which are regular exporters of tobacco now use all due care in its selection and preparation for exportation, with the result of increased estimation for the tobacco of Mexico in the markets of London, Hamburg, and New York. Much Mexican tobacco shipped to these places is manufactured and sold as that of Havana.

The Valle National, situated between the States of Vera Cruz and Oaxaca, produces tobacco of the finest quality and is entirely devoted to that purpose. The tobacco of San Andres Tuxtla, Acacuyan, Jathpam, and other portions of the same region is of excellent quality. Tlapacoyam produces large quantities of tobacco of a class inferior to that grown on the Gulf coast, though the wrappers of Tlapacoyam are much esteemed for their smoothness and fineness of texture. The cigars of Tabasco are highly appreciated by smokers. Tobacco of an inferior quality is raised in Orizaba, Chiapas, Cordova, and Oaxaca.

The price of tobacco in the leaf for wrappers and filling varies in different localities, ranging for filling from four to fifteen dollars, and for wrappers from ten to thirty dollars the arroba of twenty-five pounds.

MODE OF CULTIVATION.

Tobacco flourishes best in hot climates, though it grows and prospers also in the temperate zones. It may also be produced on all soils except those of an extremely saline or clayey character.

The lands especially adapted to the cultivation of tobacco, the best "vegas," as they are termed, are low, situated in valleys or on the banks of rivers, and of easy irrigation.

Frequent rains and a humid atmosphere are valuable agents in producing abundant and good crops.

The following, from the best sources of information, is the most approved method of cultivating this comfort-giving herb:

The principal operations are three, the sowing, the transplanting, and the gathering of the leaves, or harvest.

The sowing.—The ground is broken with a species of hoe and ridges formed for the reception of the seed, of sufficient breadth to admit of their being cleaned with facility. The stubble is burned or

removed. Then the trenches are opened and cleared, that the water used in irrigation may circulate freely.

The soil having been moistened, a clear day is chosen for sowing, which is made broadcast, care being taken to scatter the seed evenly and equally. In some localities the seed are mixed with fine sand or ashes, which are said to protect them from the attacks of certain insects and to promote their development. The weather being propitious, the shoots appear in from eight to ten days.

Those spots where the seed have not produced are now resown. Care must be used to prevent the invasion of weeds and other extraneous vegetation.

Where rain is scarce it is necessary to water the plants, which should be done early in the morning, or in the evening. The shoots are ready for transplanting when they have attained the size of the ordinary lettuce. In their removal attention is given that the earth adhering to the roots of plants should not fall upon the leaves of others, as this produces a disease called the "pulguilla" (little flea), staining the leaves and destroying the active principle of the tobacco in those places where it is deposited.

Transplanting.—The season for transplanting, like that for sowing, varies, according to the climates of the respective localities, it being sought always to gather the crop before the arrival of the frosts.

The ground is subjected to several plowings, at intervals of from ten to twelve days, and the ditches are opened, by which the fields are irrigated.

That the excessive humidity of the soil may not injure the plants, they are set either on the ridge or in the side and not in the middle of the furrow.

A hole is made for the reception of the plants by means of an iron instrument, and in each receptacle is placed a plant, or two if they happen to be feeble. If the heat of the day is not excessive, those who set out the shoots follow immediately the laborers who open the ground with their iron planters. For this reason cloudy days are preferred for transplanting.

In setting out the shoots the earth is pressed carefully around the roots and leveled so as to leave no inequality where water may settle.

About twenty days after the transfer of the plants the fields are weeded, and plants which have withered or died are replaced by others of the proper growth.

When the plants have attained the height of from 14 to 16 inches the lower leaves are removed and fresh earth is packed about the base of the stalk.

The next operation in the cultivation of tobacco is the "capazon," or pruning of the plants, which consists in cutting away the tops to prevent florescence. This is said to be an operation of such delicacy that upon the skill with which it is performed often depends the good or bad result of the crop.

According to the authorities in tobacco culture, the "capazon" is made by grasping firmly the stem of the plant, so that in cutting upward the roots may not give way, and then with a knife removing the top above the joint where the last leaf joins the stem.

The two (or three, should there be three) lower leaves are cut away, for these are worthless and absorb the sap to the prejudice of the others.

The harvest.—When the leaves arrive at maturity they become smooth and lose the down with which they were covered.

They are now gathered. This is done on clear days and after several hours of the sun.

After the first leaves are harvested the plants are cut 6 or 8 inches from the ground, the earth is again loosened about the roots and watered anew. Thus a second and often a third harvest is obtained.

Tobacco is subject to the attacks of a species of caterpillar which makes its inroads upon the leaves and roots of the plants, injuring or entirely destroying them.

On the first appearance of these insects laborers are set to work at their extermination, and to remove the leaves which have been mutilated. Constant humidity of the soil causes the plants to languish and imparts to the leaves an unhealthy color, and if the humidity is excessive, the roots decay and the plant succumbs. Excessive heat and prolonged droughts also cause the plants to perish.

Curing.—The leaves are subjected to several processes before being sent to the factories for elaboration. After being spread in the sun for some time they are strung together and suspended in a house constructed for the purpose. In order that the fermentation should not be too rapid the leaves are not allowed to touch each other. After three or four days the leaves are separated and allowed to dry slowly, it being desired that the color of the veins or stems should be the same as that of other portions of the leaf.

In the process of curing, the leaves perspire, and it is necessary that the curing places should be well ventilated, and that excessive heat should not produce so great fermentation as to be injurious. The curing completed, the leaves are separated and distributed in classes, according to the custom of the locality. They are then packed for market.

If after packing the slightest fermentation is noticed, the bales are reopened and exposed to the air till all fermentation disappears.

When the leaves are too moist they are exposed to the danger of rotting in the bundles; if too dry they want flexibility and break in the process of manufacture.

BECKFORD MACKEY,
Consul.

UNITED STATES CONSULATE,
Nuevo Laredo, June 27, 1887.

TARIFF POLICY OF AUSTRIA.

REPORT OF CONSUL-GENERAL JUSSEN.

DUTY ON PETROLEUM.

The long-pending question of the tariff on petroleum is at last definitely settled. The committees of conference of both the Austrian and Hungarian Diets have accepted the amendment known as the Gaehowlsky amendment, by which heavy crude petroleum pays a duty of 2 florins in gold and light crude 2.40 florins in gold per 100 kilograms. Under this tariff the artificial, partly refined Russian petroleum still pays 40 kreuzers in gold or 50 kreuzers in silver or paper less than the American crude. The discrimination formerly existing in favor of the Russian product amounted to 90 kreuzers in gold per 100 kilograms.

The duty on refined petroleum remains the same as under the old tariff, viz, 10 florins per 100 kilograms.

All efforts on the part of Austria to gain the consent of the Hungarian Government to impose a duty in proportion to the degree of refinement, so that the artificial Russian oil could no longer be imported under the denomination of "crude," have been in vain. Hungary was not disposed to sacrifice entirely the great advantage it had gained in favor of its Fiume refineries, to the particulars of which I have frequently called attention in my previous dispatches. The compromise made is but a slight concession on the part of Hungary. and will fail to meet the just demands of the American producer as well as of the petroleum industries of Galicia.

This new tariff is to go into operation on the 1st of June next, and the bill as passed embraces all articles enumerated in the tariff heretofore reported by me (see Consular Reports, dispatch No. 113, May 7, 1886) with the exception of the single article of sugar, as to which no final decision has been reached.

I am credibly informed that in spite of the remaining discrepancy in the petroleum tariff in favor of Russian artificial oil, the Austrian syndicate, organized some time since for the purpose of building and carrying on petroleum refineries upon Austrian soil at Trieste, will import American crude oil, and that this syndicate has obtained such important and exceptional privileges from the Austrian Government that there can be no doubt of its successful competition with the Fiume refineries. These privileges are said to consist in a rebate of taxes, donations of real estate, and a reduction of freights on Austrian railroads. It seems quite plausible that these advantages should be granted when the fact is taken into consideration that all petroleum refined at Trieste would, under the existing treaty between Austria and Hungary, pay a consumption tax to Austria of 6½ florins per 100 kilograms; while the consumption tax levied on the product of the Fiume refineries flows into the coffers of Hungary. The gain to the Austrian treasury if all petroleum consumed within its borders were manufactured at Trieste, upon Austrian soil, would amount to several millions of florins. Austria, having failed to persuade Hungary into an abandonment of its very peculiar view with reference to the importation of artificial Russian crude oil, will certainly be justified in taking the only step by which it can avoid the great loss of revenue consequent upon Hungary's action, and in making an effort at least to refine its own petroleum, instead of patronizing the Hungarian refineries.

I am inclined to believe, therefore, that the syndicate in question will be enabled to carry out its programme successfully, and that as a natural consequence the import of American crude oil to Austria will be increased, though the refined American oil will suffer under the prohibitive tariff of 10 florins, as heretofore. The fact that the refined product of American oil will be of a much better quality than the refined Russian oil is one of the main arguments in favor of this Trieste venture, for if a better article can be furnished at the same price as the Russian refined, there should be no question that the product of Trieste will crowd that of Fiume out of the Austrian market.

How seriously the loss of revenue on petroleum is felt by the Austrian Government is clearly demonstrated by the fact that in the recent discussions of the tariff commission of the Austrian house of peers the proposition was advanced to create the refinery and sale of

petroleum a state monopoly, to be carried on and administered in the same manner as the now-existing tobacco and cigar monopoly. It was argued that in this manner very large and very desirable sources of revenue would accrue to the Empire; but the Austrian minister of finance, although he did not deny the fact that the increase of revenue would be very welcome to the state, advised against the proposition, because he considered it dangerous to enrich the state at the cost of private enterprise. He maintained that the encouragement of private industries was, under present circumstances, more imperatively demanded than an improvement of the financial condition of the state; that the individual manufacturer and business man was to-day in a much more needy condition than the Empire, inasmuch as the latter enjoyed under the modern credit system still an almost inexhaustible source of auxiliary remedies. The opinion of the minister of finance prevailed, as other prominent members of the house of peers supported him, and expressed the view that instead of creating new state monopolies, it would seem to be just now the imperative duty of the Government to further the development of home industries, now so sadly depressed, and to increase the exports of the country, which were constantly being forced into narrower limits.

THE EFFECT OF A PROTECTIVE TARIFF UPON AUSTRIAN INDUSTRIES.

The reasons which were given for this state of things in the report of this high commission are very interesting, and quite remarkable, considering the source from whence they came. As the cause for this depression of trade and industry in Austria, the house of peers feels called upon to mention (1) the armed peace of Europe; (2) the industrial competition; and (3) the tariff war between the nations of Europe, a burden which, as these gentlemen admit, the nations of Europe cannot possibly carry much longer. And what is more remarkable still is that not only the Liberal press but the semi-official and highly conservative organs coincide in this view, and proceed to show that the protective tariff was principally instrumental in bringing about the present condition of things. As a matter of course these journals claim that a highly protective tariff was at first, when the expenditures of the state began to increase, necessary in order to enable the people to carry the burden of internal taxation, but they admit that this tariff system led to the tariff wars under which Europe is laboring at present, and that as an inevitable consequence the industries of Austria find themselves suddenly cut off from foreign markets and confined to the demands of home consumption, and that home consumption decreases constantly, being affected by the same causes which curtailed the export trade, and that at last the industries of the Empire stand face to face with a commercial crisis.

For this dilemma, so freely admitted, the remedies of a universal tariff reduction and international tariff conventions are proposed, but together with this proposal the admission goes hand in hand that a concert of action of the nations of Europe in this direction is, under present circumstances, out of the question. And, finally, after all these arguments and considerations, the conclusion is reached that nothing is to be done except to leave things *in statu quo*.

The exports of Austria during the last five years have suffered a considerable decrease, excepting only the exports to the United States, which increased more than $1,000,000 in 1886 over 1885, an increase

owing, principally, to the growing demand for glassware and pearl buttons, both articles being specialties of Austrian and Bohemian manufacture.

The Austrian exports to Italy, Russia, and the Levant have decreased to an alarming extent, and at a greater and more rapid rate than the exports of Germany to the same countries. Austrian manufacturers have diligently sought for the causes of this difference between the German and Austrian exports, and believe they have found them in the low freights granted by German railroads to the German exporters. They find on examination that, for instance, freights from Cologne to Moscow or from Cologne to Rome are actually lower than from Vienna. At a recent meeting of the Manufacturers' Society of Lower Austria these facts were discussed, and a memorial to the minister of commerce was submitted and unanimously passed, in which that high functionary is requested to exert his official influence in order to place the freights upon Austrian state railroads upon the same basis as those of the German roads. The memorialists could, however, not refrain from expressing the apprehension that probably, in view of existing emergencies and of the undeniable fact that the state had need of all its present revenues and resources, it would be quite questionable whether this petition would be favorably considered.

How well this apprehension is founded is clearly proven by the figures of the

BUDGET FOR THE YEAR 1887.

The report of the budget commission for this year contains the following figures of the estimated resources and expenditures of the monarchy: Total expenditures, 535,922,196 florins; total revenues, 508,840,624 florins; deficiency, 27,081,572 florins; an increase over the deficiency of 1886 of 18,289,642 florins. This deficiency of 27,081,572 does, however, not begin to cover the total financial demand of the monarchy for 1887. To this sum are to be added the credits granted by the Delegations for extraordinary military requirements and for the state railroad subsidies; the first amounting to 36,015,000 and the latter to 3,668,000 florins, so that the minister of finance will have to arrange for a total deficiency for the year 1887 of about 66,700,000 florins.

As a matter of course the interest to be paid by Austria will increase considerably, and as an inevitable consequence internal taxation will also increase. And it would seem as if it were well-nigh impossible that under all these unfavorable circumstances an improvement of the industrial conditions of the monarchy could be expected in the near future. The economic, that is, the tariff disarmament combined with the military disarmament of the European nations would at once change the aspect of affairs, and prosperity would take the place of an economy, of the nature and extent of which we, in our favored geographical position and truly exceptional condition, can form no adequate conception.

EDMUND JUSSEN,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Vienna, April 13, 1887.

WHITE-LEAD INDUSTRY OF AUSTRIA.

REPORT OF CONSUL-GENERAL JUSSEN.

As the white-lead factories of this Empire are not situate within my district, I have had no opportunity of personal examination and observation, but had to resort to written communications in order to ascertain details.

Four different grades of white lead are known to the Austrian trade, viz: (1) Kremserweiss (Kremser white); (2) Venetianerweiss (Venetian white); (3) Hamburgerweiss (Hamburg white); (4) Holländerweiss (Holland white).

Kremserweiss (Kremser white), as your correspondents, Messrs. Harrison Brother & Company, of Philadelphia, suggest in their communication to the Department, under date of May 3, 1887, bears this name because at some remote period an excellent quality of white lead was manufactured at Krems, a small and ancient city in Lower Austria. At present no white lead whatever is manufactured at Krems, and dealers here assert that for at least one hundred and fifty years no white lead has been produced at Krems. The industry of the city has for a long time been confined to the manufacture of hardware, mustard, and vinegar; but the best quality of white lead still bears the name of "Kremserweiss."

"Cremnitz" weiss, or white, is an appellation unknown to the trade here, and doubtless originated in the similarity of the two names of Krems and Cremnitz (or Kremnitz). Kremnitz (or Cremnitz) is a small city (population, 8,550) in the Bars Comitat in Hungary, and I am informed by Austrian dealers that no white lead whatever is manufactured there. Dr. I. Szabo, professor of geology at the University of Budapest, states, in answer to an inquiry made by Consul Sterne, that white lead has never been manufactured at Kremnitz in any quantity whatever. Mr. Henry Sterne, United States consul at Budapest, informs me further that the Hungarian dealers in white lead state that no white lead is manufactured at Kremnitz, and that Kremserweiss, but not Kremnitzerweiss, is known in the Hungarian market. The city of Kremnitz is known for the gold and silver mines situate in the immediate vicinity, and particularly for the so-called Kremnitzer ducats coined at the Kremnitzer mint. Kremnitzer white lead is clearly an American misnomer.

Another grade of white lead is called Venetianerweiss (Venetian white) because at some remote period, so remote that no definite recollection or tradition of the exact period exists, an excellent quality of white lead was manufactured at Venice, and a particular grade of the lead still retains the appellation.

For a similar reason a certain shade of red is called Venetian red. When Venice was famed for its gorgeously colored silk fabrics this peculiar red was especially famous and could then not be imitated by any other city. The names have survived, while the industry has been dead for centuries.

HISTORY.

White lead is an invention of the ancients, and was well known to the Greeks and Romans. Theophrastus Braisus, who lived 300 years before the Christian era, gives an elaborate description of the process

of manufacture, as well as Dioscorides (De Mater. Med., lib. v, p. 103), who lived in the same century; and Pliny states (lib. 24, cap. 8) that the white lead manufactured at Rhodes was the best grade then in the market. After the downfall of the Roman Empire the manufacture of white lead was first introduced at Venice, subsequently at Krems, Austria, and still later in Holland and England, and last of all in the other European countries.

According to Basilius-Valentinus, who wrote at the close of the fifteenth century, white lead was already, at that remote period, very extensively adulterated. (Litzbe's Testament (last will), part iv, p. 237; H. Ludwig, Handbook of the Process of Manufacture of White Lead and Sugar of Lead.)

Kremser white contains the slightest possible admixture (a trace only) of indigo.

Venetian white contains equal parts of lead and baryta (Schwerspath) or blanc fixe.

Hamburg white contains one part of lead and two parts of Schwerspath or blanc fixe.

Holland white contains one part of lead and three parts of Schwerspath or blanc fixe.

(See Kern and Stohmann, Mussprat; Encyclopædia Handbook of Technical Chemistry, third edition, vol. i. Braunschweig, 1874.)

THE RAW MATERIAL.

The raw material for the manufacture of white lead is obtained from the lead mines, the most important of which are situate in Villach and Bleiberg in Kärnthen (Carinthia). Lead is the only raw material used; silver ore is not used. Mr. J. Ranier, a white-lead manufacturer of Klagenfurth, in the consular district of Trieste, writes to Consul Gilbert, who addressed him on the subject in question at my request, that pure white lead can only be manufactured from ore or lead which does not contain any appreciable quantity of silver ore; that every ore containing silver must also necessarily contain arsenic, antimony, or copper, which metals cannot be entirely separated from the lead ore, and therefore make a manufacture of pure white lead impossible.

The price of the raw material or lead (Carinthian lead) is from 18 to 20 florins per meter centner (221½ pounds). The average market price of white lead is as follows:

Kremserweiss (or white), 45 florins per meter centner. Venetian, Hamburg, and Holland white is quoted by the Vienna dealers at 32 florins per meter centner. Mr. J. Ranier, one of the white-lead manufacturers of Klagenfurth, quotes white lead at from 28 to 45 florins per 100 kilograms or meter centners.

Mr. Paul Herbert, the proprietor of the largest white-lead factory at Klagenfurth, quotes the price of white lead at from 11 florins to 50.50 florins per 100 kilograms, according to quality.

Consul Gilbert reports the declared value of white lead exported from Trieste to the United States during 1886 as follows: First quality (Kremserweiss), 52 florins; second quality (Kremserweiss), 46 florins; third quality white lead, 41 florins per 100 kilograms.

It appears, therefore, that the American importers of Kremserweiss paid at least 1.50 florins more per 100 kilograms than the prices quoted by the manufacturers of Klagenfurth, even if they purchased only the best quality manufactured by Mr. Paul Herbert, which is not by any

means an assured certainty. It is not to be supposed that the article was overvalued in the invoices.

WAGES.

Mr. Paul Herbert reports that he pays his workmen from 1 to 2 florins per day for 10 hours' labor, while Mr. J. Rainer, another Klagenfurth manufacturer, admits that he pays his laborers only from 80 kreuzers to 1.50 florins for 10 hours' labor. I am informed from other sources that wages vary from 1 to 2 florins per day for from 8 to 10 hours' labor. A fair average, I presume, would be about 1.25 florins, or 50 cents, for 8 hours and about 1.50 florins, or 60 cents, for 10 hours' labor.

American white lead is unknown in the Austrian market, and all manufacturers and dealers concur in the opinion that it would be quite useless to attempt the exportation of white lead from the United States to Austria, first, because they claim that the Austrian raw material is much better than that obtainable in the United States (the Austrian lead ore being the best in the world), and secondly, because they believe the Austrian process of manufacture to be superior to any other known process.

The duty imposed upon white lead by the Austro-Hungarian tariff is 3 florins in gold or 3.75 in paper per 100 kilograms.

Austrian statistics furnish no information either as to the quality of lead ore produced or as to the quality of white lead manufactured, and the manufacturers do not seem to be willing to give exact information as to the quantities produced by them respectively.

Austrian white lead, or more properly Klagenfurth white lead, is exported to all European countries, to Africa, Asia, and the United States, but as only the finest qualities can bear the high costs of transportation, the total export is not very considerable. The latest statistical reports put the quantity of white lead exported during the year 1886 at 4,570 meter centners (1 meter centner = 221½ pounds English), against 1,969 meter centners imported during the same period.

The white lead imported into Austria-Hungary consists probably of the cheaper adulterated qualities manufactured in Germany.

Consul Gilbert reports that the total export of white lead to the United States via Trieste during the year 1886 amounted to 1,902 metric quintals (1 metric quintal = 1 meter centner), of which 476 meter centners were exported to the United States.

The following table, furnished by Consul Gilbert, shows the total export from Trieste by land and sea during 1886 in detail:

Countries.	By sea.	By land.
	Metric quintals.	*Metric quintals.*
Great Britain	591	
United States	476	
Turkey	207	
Austro-Hungarian ports	248	38
Italy	248	40
Greece	47	
Spain	94	
Egypt	6	
Russia	3	
Romania	1	
Argentine Republic	1	
Servia		1
Total	1,902	79

From the same source I have ascertained that the total exports of white lead to the United States via Trieste during 1886 amounted in declared value to the small sum of $7,036.22; $306.32 of which total sum was returned in the printed annual statement of exports as miscellaneous.

As already stated, Austrian statistics furnish no exact data as to the quantity of lead ore mined or lead produced in Austria. The latest statistical report of the Austrian ministry of agriculture, now before me, gives exact figures as to the amount of gold, silver, and coal produced, but it groups lead under the general classification of "other minerals," and gives no special information as to lead alone. German statistics estimate the annual production of lead in the several European countries at the following figures:

[1 centner equal to 110 pounds English.]

Countries.	Quantity.	Countries.	Quantity.
	Centners.		*Centners.*
Austria	85,000	Hanover	60,000
Prussia	43,300	Brunswick	3,000
Saxony	13,600	Nassau	6,500
Baden	2,000	Other German states	3,000

White lead is sold by the several Austrian manufacturers only in a dry state. They do not grind it in oil, but leave this admixture to the dealers and consumers (painters). The manufacturers also claim that they do not adulterate their product with other and cheaper white substances, and that they add only the purest sulphate of baryta (Schwerspath) for the purpose of producing the qualities known in the market as Venetian, Holland, and Hamburg white lead. The fact that cheaper qualities of white lead are imported into Austria-Hungary (1,969 meter centners during 1886, as above stated) seems to be strong circumstantial evidence in proof of the honest process of manufacture contended for by Austrian producers. They charge that German manufacturers are in the habit of adulterating their product with all sorts of cheap ingredients—terra alba, for instance—and that for this reason Austrian white lead is in greater and better demand than the German article. This demand is supplied entirely by three white-lead factories situate at Klagenfurth, of which that of Mr. Paul Herbert is the largest. Possibly white lead may be manufactured at other points, but if so, the quantity produced is so very inconsiderable that the Vienna dealers have no knowledge whatever of its existence.

THE METHOD EMPLOYED IN AUSTRIA IN MANUFACTURING WHITE LEAD.

In addressing the State Department for the purpose of ascertaining the method of the manufacture of white lead in Austria, through inquiries to be instituted by the United States consuls, the American white-lead manufacturers do not seem to have taken into consideration that the European competitor will not be easily persuaded to communicate a mode and process of manufacture which he claims to be superior to any process employed elsewhere, a process which is the result of the tradition and experience of centuries, and which enables him to furnish the best article of white lead known to the markets of Europe. In other words, it seems somewhat sanguine to suppose

that the Austrian manufacturer should be willing to inform an American consul of the secret method by which he produces the "Kremser white," and should thus create for himself a successful competitor in the United States, and for that matter in the markets of the world, a competition which so far has been quite out of the question, and which will probably never arise unless the Klagenfurth producer is generous enough to impart his knowledge to those who are anxious to make practical use of it. At any rate, it would seem that the solution of this riddle of manufacture could not fairly be expected, or even solicited, without the contemporaneous offer of a consideration as an equivalent for the value received.

That the "Kremserweiss" is really the best grade in the European market is quite evident from the fact that it commands a much higher price than either the French, German, or Scotch article. It appears from the reports of Consuls Mason, Eckstein, and Underwood, published in Consular Reports No. 73, that the German, French, and Scotch white leads are quoted in their respective markets as follows: Pure French white lead, 55 to 65 francs per 100 kilograms, or 5 to 5.88 cents per pound; German white lead, 45 to 50 marks per 100 kilograms, or 4.88 to 5.43 cents per pound; Glasgow white lead, £16 per 2,240 pounds, or 3.44 cents per pound; while the best Kremser white commands the price of 50.5 florins per 100 kilograms, or 9.14 cents per pound, in the home market.

It stands to reason, therefore, that the Klagenfurth manufacturers of white lead are in the possession of some advantageous process of manufacture which they would naturally guard against all inquiry and investigation. If the Austrian manufacturer cannot be induced to part with the results of his experience and exclusive knowledge even for an adequate consideration, then it only remains to purchase this knowledge from some employé with sufficient experience, and transport him to the United States to put his skill into practical operation. In this precise manner the owners of Russian petroleum wells and refineries have already availed themselves of the superior skill of American refiners of petroleum, many of whom are now employed in Russia, as well as in other parts of the continent of Europe, supporting and strengthening the competition of Russian oil as against American petroleum in the markets of Europe.

Although a thorough and satisfactory accomplishment of the object of investigation could not reasonably be expected under the existing circumstances, I believed it my duty to make an effort to obtain as many details as possible. The result of the inquiry may be summed up in the characteristic answer which Paul Herbert, the principal white-lead manufacturer of Klagenfurth, transmitted to Consul Gilbert at Trieste, in whose district the factory is situated. Mr. Herbert says, *verbatim et literatim:* "White lead (Bleiweiss) is manufactured in this country according to the Holland method, by a system of chambers developed by an experience of many years." This is the sum total of his answer. How and to what extent this system is developed and what the exact nature and description of this system is, Mr. Herbert does not condescend to say, and it is not to be expected that he should, since the development of this sytem is undoubtedly a valuable business secret. This Holland or Dutch method is fully described in numerous technical works easily accessible. Most writers on the subject state that the Dutch process has the disadvantage of imparting a yellowish tint to the white lead, and I should suppose, therefore, that Mr. Herbert must have made very important changes

and improvements in the old method to enable him to produce the very excellent article of "Kremserweiss."

The following methods are also employed in Europe in the manufacture of white lead, viz:

Lothman's process or method (see London Journal of Arts, September, 1847, p. 92); Gannal's method; Fourmetier's method; Pattinson's method; Chenot's method; method employed in the white-lead factory of Theodor Lefebre & Co., in Moulins-Lille, Departement du Nord, France; Barreswill's method (see Journal de Pharmacie, October, 1882, p. 291). All of which methods and processes are particularly described in H. Ludwig's Hand-Book for the Manufacture of White Lead and Sugar of Lead, second edition. Weimar, 1854. B. Fred. Voigt, printer and publisher.

EXPORTS OF AMERICAN WHITE LEAD TO AUSTRIA.

In view of all the facts it would seem as if the prospect of exporting American white lead to Austria was decidedly unfavorable. First of all, the American manufacturers cannot as yet produce the best quality of Kremser white, else this grade would not be exported from Trieste to the United States at the price of 50.5 florins per 100 kilograms, or 9.14 cents per pound. As regards the cheaper grades, the German competition would have to be met, and the German manufacturer enjoys a decided advantage in the matter of transportation. Moreover, cheap grades of white lead are, as already stated, manufactured in Austria, where raw material is to be had in abundance, and, as is claimed, of a very superior quality. Last of all, another factor would have to be considered as regards competition in cheap and adulterated white lead. Barytes are admitted free under the Austro-Hungarian tariff, while the American tariff imposes a duty of one-fourth cent per pound on unmanufactured barytes and 10 per cent. ad valorem on manufactured barytes—another illustration of the truth of the assertion "that the American tariff on raw materials impedes the progress of the American export trade."

EDMUND JUSSEN,
UNITED STATES CONSULATE-GENERAL, *Consul-General.*
Vienna, July 1, 1887.

DESCRIPTION OF WHITE-LEAD GRINDER.

A is a stationary receptacle of cast iron lined with bronze, provided with diagonally running tooth-shaped grooves. In this receptacle a grooved cone rotates, which is fastened to the shaft B, which rests in bearings, as shown by drawing.

The wheel D enables changing the elevation of cone, the grinding being thus regulated; motion is imparted to the shaft B through the girth-wheel G.

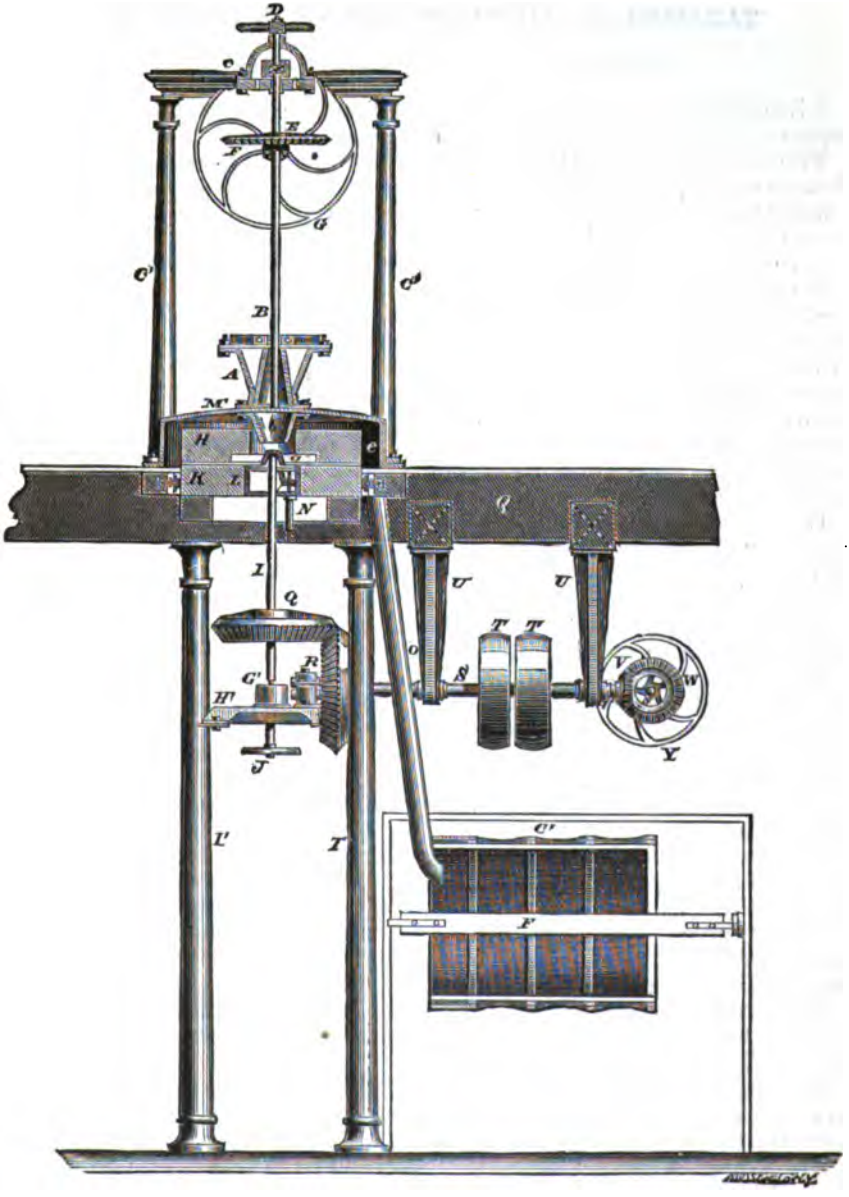
H is the upper millstone, of white marble, with a cylindrical hole, into which is fastened a bearing to receive the end of the mill-iron J.

K is the bottom millstone, also of white marble, provided with a square hole, which contains an iron box, L; this box is divided into six compartments, three of which act as receivers for grease, the others containing wedges. Each of these wedges is provided with a counter-wedge, regulated by the bar N.

The mill rests upon the wooden structure Q, into which the copper casing M, which carries the receptacle A, is screwed. The white lead, coarsely ground between A and M, goes through the funnel *b* to the millstones, where, after being finally ground, it is forced into the space *e*, communicating with the bottler through the zinc pipe O.

The mill-iron, which revolves 276 times per minute, receives its energy through the cog-wheel Q, which again is driven by the wheel R, fastened to the shaft I, receiving its rotary motion from wheel W, which at the same time imparts motion to G with girth.

With four of these mills 3,000 kilograms of white lead can be ground per day.



WHITE-LEAD GRINDER—FROM A DRAWING BY EDMUND JUSSEN, JR.

TAXATION OF SPIRITUOUS LIQUORS IN GERMANY.

REPORT OF VICE-CONSUL-GENERAL VERSEN.

I transmit a copy of the act relative to the taxation of spirituous liquors, increased import duties, &c., approved June 24, 1887.

The complicated and not always clear language, as well as the structure of periods, in which this act is framed, could not, even to a well-trained German, be recommended as a model of style. It was, therefore, difficult to render the following extracts from this act in as clear English as the original text would admit of.

From this act it appears that from and after the 1st of October, 1887 an excise (consumption tax) shall be collected under control of excise officials of the respective German states. This excise is fixed at the rate of .50 mark (11.9 cents) per liter (1.0567 wine quarts) pure alcohol if the total quantity of alcohol consumed amounts to 4.5 liters (4.75 quarts) of pure alcohol per head of the German population as ascertained in the last census. And if such quantity consumed is larger, this excise shall be at the rate of .70 mark (16.6 cents) per liter of pure alcohol.

Exempt from this excise shall be: (1) distilled liquors, if exported; (2) distilled liquors used for industrial purposes, for the production of vinegar, for sanitary and scientific purposes, and for polishing, heating, cooking, and lighting purposes.

The still-owners shall have the right, at their cost, to demand to have their spirits officially denaturized at their stills (section 1).

This excise shall be paid upon the spirits leaving the state control (to be excised at the still-houses by excisemen of the state) for home consumption by the person selling them out (section 3).

Rectification of spirits is compulsory from and after the 1st of October, 1889 (section 4).

Sections 5 to 11 contain special provisions as to measures to protect the interest of the state.

Section 12 (which will materially bear upon international trade) provides that in case of exportation of products, for the preparation of which spirituous liquors in trade were used, a repayment of the excise at the rate of .50 mark per every liter of pure alcohol contained in the articles exported may be granted under special orders to be issued by the general federal council.

Sections 13, 14, and 15 contain provisions with regard to small still-owners, to change of ownership, examination of the premises by excise officials, &c.

Section 16 establishes the statute of limitation for the payment of any excise due.

Sections 17 to 38 contain penal provisions.

According to section 39 the net proceeds from this excise go to the several federal states, according to the number of population within the "ardent-spirits union."

The second part of the said article (sections 40 to 43) treats of a so-called "Maischbottich-Steuer" (a tax collected according to the capacity of the mashing-vessel; also of a tax on material used in

making spirituous liquors and of an additional tax to the said excise).

Section 40 provides for the general introduction of the act of July 8, 1868, as far as the same has not been modified by sections 41 to 43 of the act under consideration.

This act intends that in future all German states are to form but one "ardent-spirits-tax union," while up to date there exist in Germany two different unions of that kind, viz, the Bavarian union, to which belong Bavaria, Wurtemberg, and Baden; and the "Reichs-Branntwein-Steuer-Verein," a union including all the remaining German states.

Within either union a brandy excise was collected, viz:

(1) In case of using grain or any other farinaceous substances, or beets and beet sirup (molasses): (*a*) from the so-called "agricultural" distilleries in operation only for the time from November 1 up to May 16 and working off smaller quantities of grain and other farinaceous substances of own produce, at the rate of 25 pfennigs (5.9 cents) per every 22.9 liters of mash contained in the vat or tub; (*b*) from other than agricultural distilleries, 30 pfennigs (7.14 cents).

(2) In case of using other material, taxation was effected according to the quantity of the material used in the production of ardent spirits; the rates of excise varied according to the material used.

Section 41 of the new act changes that mode of taxation, providing that—

(1) The collection of the "mash-tub tax" shall hereafter take place only (*a*) in the case of agricultural still-houses, working exclusively grain or potatoes, and using *renclues*, or waste, either as food for cattle or manure, on own estates, and (*b*) in case of distilleries such as are working off molasses, beet, and beet juice.

(2) The "mash-tub tax" is fixed at 1.31 marks ($0.317) per hectoliter of mash contained in the mashing-vessel, and this in every instance of mashing. At agricultural still-houses in operation during the time from October 1 to June 15 the "mashing-tub tax" shall be collected at the following fractional rates of the above rate: (*a*) At $\frac{6}{10}$ if, in the course of one day, on an average, not more than 1,050 liters contained in the vats are mashed; (*b*) $\frac{8}{10}$ if not more than 1,500 liters, and (*c*) $\frac{9}{10}$ if not more than 3,000 liters are mashed.

(3) Of tax on materials used in the make of ardent spirits there shall be collected (*a*) .35 mark (8.3 cents) per hectoliter of husks beaten together of grapes; (*b*) .45 mark (10.7 cents) per hectoliter of kernel fruit, waste thereof, and of all kinds of berries; (*c*) .50 mark (11.9 cents) per hectoliter of brewing refuse, pressed dregs of wine, and roots of all kinds; (*d*) .85 mark (20.5 cents) per hectoliter of wine and cider, liquid dregs of wine, and stone fruit. A repayment of the "mashing-tub tax" and of the tax for materials used in making spirits, may be granted by the federal council not only for liquors used in industry, but also in case of liquors used for sanitary and scientific purposes, or for cleaning, heating, cooking, and illumination.

ADDITIONAL TAX TO EXCISE.

Section 42 provides for the collection of this additional tax in case of so-called "industrial" distilleries (not agricultural), which, working off farinaceous substances or mixtures of farinaceous and non-farinaceous substances (not otherwise provided for under section 41, I (*b*) of this act), shall be exempt from "mashing-tub tax."

On "ardent spirits" manufactured in such industrial distilleries as are subject to an excise an additional tax of .20 mark (4.7 cents) per liter of pure alcohol shall be levied.

Distilleries that existed before the 1st of April, 1887, and that do not mash more than 10,000 liters in capacity of the mash-tub during one day, shall, to the extent of their working theretofore, be allowed a reduction of the additional tax by .04 mark per liter of pure alcohol; and a reduction by .02 mark in case of their mashing more than 10,000 liters, but not to exceed 20,000 liters.

In like manner, at petition, other than industrial distilleries, not working molasses, beet, or beet juice, can be exempted by the Governments of the respective German states from payment of the "mashing-tub tax" or "spirits-material tax."

In case agricultural distilleries working off grain should make use of this privilege (*a*) on ardent spirits manufactured in distilleries producing not more than 100 hectoliters of pure alcohol in one year, an additional tax of only .12 mark (2.8 cents) shall be collected; (*b*) on ardent spirits in case of distilleries manufacturing in one year more than 100 but less than 150 hectoliters, only .14 mark.

Agricultural distilleries mashing on one day more than 1,500 liters in capacity of tub shall be subject, if operated in the time from June 16 to September 30, for this time, instead of to a "mashing-tub tax," to an additional tax to the excise, payable, under No. I, subsection 1, by industrial distilleries.

On distilled liquors manufactured in agricultural distilleries mashing in one day more than 10,000 but not to exceed 20,000 liters in capacity of the mash-tub, as far as such liquors are subject to excise, an additional tax at the rate of .02 mark per liter of pure alcohol shall be paid; and .04 mark in case of such liquors being made by agricultural distillers mashing more than 20,000 liters in one day.

INCREASED DUTY ON ARDENT SPIRITS IMPORTED.

Section 44 provides that from and after the day of promulgation of this act, on arrack, cognac, and rum imported a duty of 125 marks ($29.75) [heretofore 80 marks, $19], and on all other ardent spirits 180 marks ($42.84) [heretofore $19] per 100 kilograms shall be collected.

Section 45 relates to the so-called "transition tax or impost" on spirituous liquors imported from one German spirits union into the other, fixing 96 marks ($22.84) per hectoliter of pure alcohol.

Section 46 provides that on the 1st of October, 1887, on all ardent spirits in free circulation within the union shall, subject to the orders of the federal council, an excise be paid in the form of a so-called "Nachsteuer" (after-tax) at the rate of 30 marks per liter of pure alcohol, allowing some cases of exemption.

Sections 44, 48, and 49 contain special provisions as to the introduction, &c., of this act.

SUPPOSED EFFECTS OF THE NEW LAW.

The carrying out and promulgation was, no doubt, as much as possible expedited in order to have the protective measures as therein provided for take force and effect as quickly as possible.

As such effects, in the first place, an increase of duties on ardent spirits imported must be regarded as taking effect immediately upon

such promulgation, though the act itself does not take general effect until the 1st day of October, 1887. But there is no doubt that the period intervening between the time when the bill was first introduced into and passed its first reading by the German Reichstag up to the time of the promulgation of the act will have been fully utilized for the quick importation of ardent spirits of every description.

The second important effect which the promulgation of this act will exert is a reduction of the activity of distilleries up to October 1, 1887, and consequently an enhancement of the "mashing-capacity-tub" and of the export bounty up to the 1st of October next.

With regard to this increase of the export bounty, the *Breslauer Zeitung* speaks of it as an unprecedented occurrence, as the same writes as follows:

> Every item of spirits exported during the next three months receives a bounty of 48 marks per hectoliter, although on same as far as at present ready for use only a tax of 16 marks has been paid. The exporter thus receives a net bounty of at least 32 marks. No man knows how large stores of spirits are at present in Germany. Some experts estimate these stores at far over 1,000,000 hectoliters. After the 1st October the result will be known, as well as the amount of loss the German Empire may have sustained by the operation of this new act. Thereby an artificial pressure upon prices in the international market will be exerted, which rightfully will much gall the temper of foreign countries. * * * It involves a transgression on the principle of international law, now more and more embodied in treaties, that the competing foreign country ought not to be injured by such export premiums.

F. VON VERSEN,
Vice-Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, July 2, 1887.

SUGAR BOUNTIES IN GERMANY.

REPORT OF CONSUL MILLAR.

A short time ago the *Leipziger Zeitung*, which is an official organ of the Saxon Government, published an article on the above subject with reference to the general question of bounties and the limits within which they should be confined. As the subject is in itself one of considerable importance, and is now occupying the attention of the Imperial Government, I have thought it worth while to summarize the arguments and conclusions of the article.

The duties of the Imperial Government are defined by the writer as twofold: First, to see that an important and wealthy industry, such as the sugar fabrication, contributes its due share towards the taxes of the country; second, to protect the industry from the ruinous effects of French and Austrian competition, which would otherwise bring disaster upon those districts of Germany which depend upon the continuance of the sugar industry for their prosperity. The mean between these two functions, however, is no longer maintained. Last year 8,500,000 cwt. of sugar were consumed, on which a tax of 9 marks per cwt., amounting to about 76,000,000 marks, was levied. But of this sum only about 33,000,000 will remain in the treasury, the surplus of 43,000,000 returning as bounty into the pockets of the exporting manufacturers and refiners, to enable them to undersell their French and Austrian competitors in foreign markets. A similar state of things exists in Austria and France, in which latter country the bounty threatens in the course of a few

years to consume the entire income derived from the duty. Obviously this state of things cannot continue, and the Governments of all three countries have been compelled to devote their attention to the question.

The remedy, in the view of the writer of the article, is to be found by limiting the influence of protective duties. Such duties should confine themselves to securing the home market for the native producer; they should not attempt to secure for him the control of foreign markets. An industry which desires to extend its operations beyond the frontiers of its own country must do so with its own resources and at its own risk. It cannot expect support from the taxpayers of the fatherland. Such support is not only unjust to the tax-payers and to other industries; in the long run it is injurious to the favored industry itself, and an industry which cannot freely encounter competition does better not to enter into the lists at all.

The article then proceeds to consider the prospects of the sugar industry after a reduction of the bounty. As respects methods of cultivation and manufacture, the sugar industry of Germany is superior to that of any other nation; and if other German industries are able, under less favorable conditions, to compete successfully with other countries, the sugar industry may reasonably be called on to do the same. An examination of statistics leads to the same conclusion. The European production of sugar last year was as follows:

Countries.	Quantity.	Countries.	Quantity.
	Cwt.		*Cwt.*
Germany	21,200,000	Belgium	1,900,000
Austria	10,500,000	Holland	1,000,00
France	10,000,000		
Russia	9,400,000	Total	53,000,000

The export from Germany in the last five years is estimated to have been as follows:

Years.	Quantity.	Years.	Quantity.
	Cwt.		*Cwt.*
1882-'83	9,400,000	1885-'86	10,000,000
1883-'84	11,900,000	1886-'87	13,000,000
1884-'85	13,500,000		

These figures show that German sugar plays a leading part in the markets of the world, and that foreign countries are largely dependent on Germany for their supplies. The only competition to be feared is that of France, and even here it is to be remarked that a long time will elapse before France is in a position to raise its production from 10,000,000 to 20,000,000 cwt., and when it has done so, the increased consumption in the world will probably leave France in the same position as now. There is, consequently, no reason to fear that sugar factories will work with no profit if the export bounties are withdrawn.

Two classes of bounties have to be distinguished in Germany, the bounty on raw sugar and the special export bounty on refined sugar. The manufacturer of raw sugar is generally a farmer also and cultivates large areas of ground. He pays 85 pfennigs (20¼ cents) tax per cwt. of beets and receives 9 marks ($2.14¼) returned on the export of

each cwt. of raw sugar, so that he presumably uses about 10½ cwt. of beets to produce 1 cwt. of sugar. In point of fact he only uses 8½, so that he gets about 2 marks surplus bounty on each cwt. of manufactured sugar. The refiners are a smaller, and, for the state, less important class than the farmer manufacturers of raw sugar, but they receive greater benefits. The tax paid by the refiners on raw sugar (that is, the difference between the home and export prices) is, as above, 9 marks per cwt. Ten cwt. of raw sugar produce nine of refined, so that the export bounty should not exceed 10 marks. In fact it amounts to 11.10 marks ($2.64), so that the state loses 1.10 marks (26 cents) on every cwt. of refined sugar exported. This inequality is not removed by the new proposals for the reduction of the bounties, inasmuch as the tax on raw sugar is reduced to 8.63 marks, and the export bounty on refined sugar to 10.75 marks. Strictly, the export bounty should be reduced to 9.58 marks, so that the new proposal would produce a loss to the state of 1.17 marks per cwt. In other words, the state will collect some 20,000,000 marks from the farming manufacturers of raw sugar to return the bulk into the pockets of the few refiners, while only a million or two will come into the treasury. This form of the proposal is no doubt due to the great political influence of the refiners; but the article concludes with the belief that the Imperial Government and the Reichstag will nevertheless view the matter more in the light of the general welfare and protect the interests of the many against those of the few.

SAM'L ROLFE MILLAR,
Consul.

UNITED STATES CONSULATE,
Leipsic, Germany, July 21, 1887.

POPULATION AND TRADES IN SAXONY.

REPORT OF CONSUL MILLAR.

Under this heading I have brought together a number of statistics collected from various sources respecting some remarkable changes which have occurred in the last decades in the proportions in which various occupations are followed in Saxony, and the results which these changes have had in altering the distribution of the population between town and country.

The following table shows the distribution of the population among the principal types of occupation in the years 1849 and 1882:

Class of occupation.	Actual number of persons employed.		Percentage of total.		Increase or decrease.
	1849.	1882.	1849.	1882.	
Total population	1,894,431	3,014,822	.....	.....	*Per cent.* + 59
Land and farming	334,780	292,886	17.1	9.7	— 14
Industry	408,188	724,513	21.5	24.1	+ 77
Trade	41,428	130,894	2.2	4.4	+216
Public service	37,187	67,317	2.0	2.2	+ 81
Laborers of shifting occupations	8,113	5,140	0.4	0.8	+210
Domestic servants	84,414	66,914	1.8	2.2	+ 94
Of no occupation	71,808	93,736	3.8	3.1	+ 30
Dependents	958,518	1,613,430	50.6	53.5	+ 68

The principal features of this table are the retrogression of land culture and the progress of trade, pure and simple. The number of farmers has decreased absolutely by 14 per cent. and relatively to the population by 7½ per cent., while the number of tradesmen has increased absolutely threefold, or, relatively to the population, double. Another feature of importance is the comparatively large increase in laborers of no definite occupation.

Both these phenomena are of an unfavorable character. Not only is the increase in the number of middlemen prejudicial both to the consumer and to the producer; it leads to undue competition among the middlemen themselves, and already the cry of "overcrowding" is heard in most trades. The growth, too, of a large class of untrained laborers is not unfraught with danger to the community. It is pointed out by the writer from whom I derive the figures that the class in question is one which can have no interest either in any special occupation or in the maintenance of social institutions in general. Such men are readily accessible to anti-social agitation, and their existence explains to a large extent the rapid spread of social democracy.

It will be observed in the above table that the figures for industrial occupations show almost as much increase as those for land and farming show decrease, from which it might be inferred that these two branches stand in an inverse relation to each other. The inference is confirmed by the following table of the proportion of inhabitants engaged in farming and in industry in the chief states and provinces in the German Empire. It will be seen that where industry flourishes farming employs but a small percentage of the population, and that where the bulk of the population devote themselves to farming it is at the expense of industry. It should also be noted that the population is, on the whole, densest in the manufacturing provinces. A fourth column, which shows the population of persons engaged in trade, does not admit of any reliable conclusions; the factors which regulate the development of trade are obviously independent, to a large extent, of farming or industrial conditions.

State or province.	Number per 1,000 inhabitants engaged in—			Position in regard to density of population.
	Industry.	Farming.	Trade.	
Saxony (Kingdom)	562	199	119	1
Rhineland	473	317	106	2
Westphalia	468	351	89	7
Thuringia (eight states)	447	367	79	11
Brunswick, Anhalt, Waldeck, and the two Lippe	418	367	95	13
Saxony (provinces)	408	375	106	12
Alsace-Lorraine	365	419	92	5
Hesse (Grand Duchy)	365	415	106	8
Hesse-Nassau	354	405	115	10
Silesia	353	447	88	9
Rhine Palatinate	351	466	87	4
Wurtemberg	344	451	78	8
Brandenburg (without Berlin)	328	444	95	18
Baden	315	491	90	6
Franconia (the three provinces)	306	498	86	14
Sleswig-Holstein	297	443	123	15
Hanover	292	500	101	19
Oldenburg	280	523	99	21
South Bavaria	251	583	79	16
Mecklenburg (two)	240	596	83	24
Pomerania	227	545	93	23
West Prussia	192	605	76	20
Posen	173	640	69	17
East Prussia	168	643	61	22

Returning to the Kingdom of Saxony, it will be remarked that this small state stands at the head in respect both of density of population and devotion to industrial pursuits. It may not be without interest if I add in a third table the names of the principal Saxon industries, together with the proportions which fall to Saxony and three or four other of the chief German states:

Occupation.	Proportion in—				
	Saxony.	Prussia.	Bavaria.	Wurtemberg.	Baden.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Embroidery, lace, and crochet work in factories	80	15	.....	1	.....
Knitting as home industry	60	18	4	4	.....
Knitting in factories	60	14	1	7	.....
Preparation of spinning materials	59	33	.....	.....	2
Embroidery, lace, &c., home industry	56	22	8	4	.....
Trimmings	46	43	2	1	.....
Musical instruments	43	27	4	7	2
Bleaching, dyeing, and finishing of spun goods	35	39	3	2	2
Ladies' ready-made clothing (confection)	35	44	11	1	.....
Type-founding, type-cutting, and wood-cutting	33	38	4	8	.....
Weaving as home industry	21	57	8	3	1
Spinning in factories	20	32	12	6	5
Paper and pasteboard manufacture	20	41	9	6	3
Bookselling, &c	20	49	10	4	2
Straw, wood, bast weaving, &c	19	30	10	4	7
Millinery and artificial flowers	18	53	9	2	2
Book-binding, pasteboard-box manufacture	18	50	10	5	3
Undertaking	18	45	15	3	1
Weaving in factories	17	47	6	3	3
Printing, lithography, &c	16	51	9	4	3
Machine and tool manufacture	15	47	9	3	4
India-rubber and hair plaiting and weaving	15	65	1	1	5
Glove, corset, cravat, &c., manufacture	15	46	6	17	.....
Peddling	15	45	11	10	3
Forwarding and commission trade	14	44	6	.....	3
Turning	14	40	12	5	2
Lamp manufacture	14	74	2	.....	.....
Hat-making, furriery	13	57	8	4	3
Iron-founding	12	60	6	2	2
Quarrying	12	41	16	5	5
Leather, india-rubber, &c., goods	12	62	3	.....	12
Gilding	12	59	12	2	3
Artand artistic trades (exclusive of theater and music)	12	51	12	3	5
Entire population	6	60	11	4	3

This table illustrates very strikingly that concentration of industrial occupations in Saxony which was indicated in a previous table. In seven branches of manufacture Saxony stands absolutely at the head of the German states; in all the branches enumerated Saxony is interested in at least double the proportion which her population bears to that of the German Empire. With few exceptions the only competitor of Saxony is Prussia, and though Prussia, owing to her large extent, absorbs the lion's share of most of the industries, yet the portion in which she does so, unlike that of Saxony, is almost without exception less than might have been expected from her population.

To complete the view of Saxon industries I add those in which the state is interested to any considerable extent: 11 per cent. smelting, tobacco manufacture, building undertakings, locksmith's and glazier's work, tinware manufacture; 10 per cent. railroads, insurance, woodwares, needles and wire, physical and chemical instruments, coal-tar, manures, combs, chocolate, preserves and coffee substitutes, carpen-

try, thatching, auctioneers, pawnbrokers; 9 per cent. banking and money, market gardening, basket-making, photography, builders; 8 per cent. coal, sand, lime and clay works, glass and porcelain manufacture, music and theater, carriage of persons and goods, metal work (exclusive of iron), tailoring, baking, rope-making, saddling, pottery, hotel-keeping, commercial agencies, surveying, servants, messengers and porters, baths, and laundries.

In other occupations Saxony participates only in a proportion which does not exceed that of her population to the population of the Empire.

There is one point in the above table which deserves further consideration, that is, the "home industry," which is so important a factor in lace, embroidery, knitting, and weaving. Nearly half a million people are engaged in these and similar home industries in Germany, and of this number nearly 140,000 fall to Saxony alone. Of these, again, 90,000 fall to the department of Zwickau, which is thus the chief seat of home industry in Germany. And as Saxony stands absolutely alone at the head of Germany, so does Zwickau in certain branches of home industry. These are:

Occupation.	Number persons.	Occupation.	Number persons.
Stocking manufacture	26,250	Lace and embroidery of white stuffs	5,494
Trimmings (passementerie)	12,498	Stocking-finishing	4,437
Woven goods, mixed	10,133	Glove manufacture	3,19
Wool-weaving	7,738	Ladies' ready-made clothing (confection)	4,133

In linen goods Bautzen, with 11,487 persons, is pre-eminent.

A further result of this active development of industrial life in Saxony is the influx of foreigners and strangers and the movement of the population within the state itself.

It was shown in the first table of this report that Saxony is more densely populated than any other German state. Not only is there, however, less emigration from Saxony than from any other part of Germany, but in 1885 there was actually in the state a non-Saxon population of 343,032 persons, and of these 290,364 came from other states of the German Empire.

The movement of the population within the state is given by a comparison of those districts which show increase of population over the excess of births with those that show a decrease. It appears that while the smaller towns and country districts show a total decrease of nearly 60,000, there is a surplus population of more than 69,000 in the following city and suburban districts:

Leipsic district	15,034
Dresden town	14,489
Leipsic town	13,379
Chemnitz:	
Town	9,546
District	8,140
Plauen district	4,313
Dresden:	
New town district	3,329
Old town district	959

It is evident from these figures that the large towns and their suburbs have increased at the cost of the smaller towns and rural districts. We have, in fact, another case of that "attraction to the town" which is so marked a feature of European life.

The authority from whom I have derived these statistics further points out that this surplus population is mostly composed of females, and endeavors to explain this curious phenomenon. In view of the large number of females who find employment in textile industries it has been suggested that the exchange of factory for country life has produced the migration of females to towns. But the writer referred to remarks that Leipsic and Dresden, where the chief increase has taken place, are not especially towns of textile factories. He is inclined rather to find the direct cause in the demands for domestic help, and to attribute to factory life only an indirect influence, in so far as many daughters of the middle and lower classes in towns prefer some kind of business occupation to domestic service either in their own or other families. The passage of the girls to business or industrial life naturally produces a demand for domestic servants; and it confirms the writer's theory that most of the girls in this occupation in the larger towns come from the country.

Whether or not this solution be correct, there is no doubt of the attractive influence of the town on country people, and it is to be feared that this influence is often very harmful. It is, at any rate, well worthy of attention in states whose prosperity depends on the maintenance of a vigorous agricultural population.

SAM'L ROLFE MILLAR,
Consul.

UNITED STATES CONSULATE,
Leipsic, Germany, June 18, 1887.

SEWING-GIRLS IN GERMANY.

[Translated from a report to the Imperial Diet of Germany, and transmitted to the Department by Consul Joseph Falkenbach, of Barmen.]

In the spring of 1885 the Imperial Diet took the initiatory steps to ascertain the proportion of wages of the working women in the linen and dressmaking branches of industry, also the facts in regard to the sale and furnishing of working materials to the female employés by their employer and the prices charged for such material by the latter. The representative of the chancellor of the Empire lately communicated to the Imperial Diet, in a series of reports, the results of these inquiries. The impression made by these reports is indeed extremely sad. So many people complain of poverty and call for relief from the state Government; but, alas! we meet in large cities, especially in Berlin, with a really frightful misery among the poor sewing-girls, who live by themselves, and who do not even earn enough in twelve health-destroying hours to pay for the most necessary provisions and for lodging. Woe to the poor girl who, without family or relations to fall back upon, without knowledge or special abilities, must begin the struggle for life! If she is not more than ordinarily fortunate, she will go to ruin with the majority of her companions, either through honorable suffering or through disgraceful immorality. The father who must send his only son into the bloody war does not stand in need of one-tenth part of the fear which the mother must have whose daughter becomes a sewing-girl in a large city.

The subject was first brought before the Imperial Diet through a petition against curtailing the wages, caused by compulsory measures on the part of the employer to buy of him thread, needles, machine-

oil, &c. This point is in itself not without significance, since a Berlin reporter calculates that the average wages of the seamstress in white linen (12 to 15 marks, or $3 to $3.50 per week) are reduced by the payment for thread, &c., to the amount of 1 mark, *i. e.*, from 6.6 to 8.3 per cent.

In relation to the other discoveries about the economical and social condition of the sewing-girls in general, this question is of minor importance, the more so since abuses in this respect have been retained only in a very few parts of Germany. It is expressly stated that the discussions on this subject in the Imperial Diet have, in many instances, led to the abolishment of the evil in question. Whether or not this evil has in the mean time begun to flourish again is another consideration; a lasting remedy in this respect is hardly possible as long as the gigantic demand for employment leaves the fixing of the wages to the mercy of the employer.

If we search after the causes of such almost unbearably low wages, we find invariably, in all reports, the answer, first, that too many girls and women seek for work in the white-linen and dressmaking branches of industry, partly as a means to increase the family income, partly for the purpose of covering their expenses for articles of luxury. Such sewing-women can work for wages at which a seamstress, who has to make almost entirely her living with the needle, will starve.

In the eastern as well as in the western cities of Prussia, and in Wurtemberg specially, appears this ruinous competition. Especially instructive are the situations of the sewing-women pictured in the following report of the Dusseldorf trade counselor:

> Not considering the sewing-women who work on corsets, workmen's shirts, and pantaloons, among whom the daughters and wives of the workingmen largely predominate, it can safely be said that the majority of seamstresses are not to be found among the laboring class. Much more do they belong for the most part to families of retail traders in Dusseldorf, even to families of artist painters and to families of the lower officials of the state and commonalties.
>
> I feel obliged especially to direct the attention of the authorities to the fact that the daughters of post and railroad officials are largely represented thereat, and that in a majority of the cases the officers are through necessity compelled to turn their daughters towards this always dangerous source of industry. Already, through the competition of these officers' daughters for work, have the wages of the laboring classes and poor widows been considerably reduced, and this is done in a still higher degree by the crowding in of female members of the better-situated middle class, not only, as is frequently stated, for the purpose of learning the work and becoming proficient in the duties of the future housewife, but more of gaining an employment. The earnings of such ladies do not serve to satisfy the necessary wants of life, but to gratify their own or the pride of some members of their family they are squandered for articles of luxury, especially for toilet articles. Employers of such ladies declared to me they were often not able to recognize them on the street, in concerts, in theaters and balls, and their own wives and daughters were not in a situation to rival them in toilets. The girls who are compelled to work for a living and to sit side by side with such ladies, or to deliver finished work sometimes in their presence, do not wish to contrast too much in their outer appearance—desire to dress in the same fashion—fall out with their parents because they claim their wages, separate from them, and either by dishonesty or through a male friend who keeps their company come to ruin and final prostitution.

In all reports we see it confirmed that only those sewing-girls in the white-linen and dressmaking branches of industry have a passable existence who have sufficient support in their family ties; while the self-dependent girl, who lives by herself, generally falls an easy prey to designing men, and ends in private or public immorality and prostitution. The term "sewing-miss" is everywhere a not very flattering synonym.

A very favorable report on the moral condition of the sewing-girls comes from Stettin, but it only confirms the statement already made. In Stettin prevails a system of work-rooms, and the promoters of the same are, as a rule, in favor of girls living with their families because they work cheaper; and in order to secure for themselves the daughters of respectable parents they must at once cast off all doubtful characters; the latter generally going to Posen, Breslau, or Berlin.

As a further cause of the poor wages nearly all reports agree to point out the Berlin competition. Thus writes the trade counselor at Dusseldorf:

As causes of the depressing influences of the Berlin industry are quoted besides the venality, concentration, and intensity of the business there, in the main the immense number of working hands in that city and the greater choice and surprising cheapness thereby produced; besides it may be of importance that the Berlin house industries, as report says, are not subject to the law on relief of the sick, and are, in many instances, supplied from the ranks of prostitutes, something that happens in Rhineland and Westphalia only in exceptional cases.

There is fear, however, that the Dusseldorf expert is, as to the latter point, not altogether correct. The ratio of immorality among workingwomen as a class seems to be in all the larger industrial cities and districts nearly equal. The girl degraded to the last stage of police control does not work any more; the workingwomen who live by themselves almost everywhere have relations with the other sex.

What is the cause, then, of the "fabulous cheapness" of female labor at Berlin? To this fundamental inquiry the report of the Berlin trade council, as far as stated in the official résumé, gives an answer by no means sufficient. It is known that Berlin is, in the dressmaking branch, the leader of the fashion. The report devotes over five columns to the white-linen branch of industry, and indeed, for the most part, to the thread question, settling the whole question of dressmaking in twenty-five lines. Here they follow:

The situation of the sewing-women in the dressmaking branch, *in toto*, can be called even worse than of the seamstress in white linen. Although the former has no expenses for thread, &c., the proportion of her wages is screwed down to the utmost limit. The profit realized, for example, in the wholesale business of cloak-making, especially for the foreign market, is, principally through a number of interested jobbers, reduced so much that a very skillful seamstress cannot earn more than from 8 to 9 marks per week, and an inexperienced one only from 4 to 5 marks. Considering that the season for cloak-making only lasts from four to five months in the year, the earnings during the other seven or eight months can be considered only where a sewing-girl is in possession of her own machine, and can take in sewing on aprons, underwear, &c. Many assert that the sewing-girls in dressmaking establishments more frequently fall into prostitution than others. This may be so; the great misery existing here may induce many a one to seek lucre which she at first detested; the constant seeing, manufacturing, and admiring of finery and fancy goods may often create such an intense desire for the possession of such articles that the moral sense is entirely silenced.

This report of the state of things in Berlin is entirely insufficient. In the estimate of wages paid to female dressmakers the trade council may of course be correct; but we believe that the average earnings of a seamstress in white linen, 12 to 15 marks per week, are estimated too high.

The trade council also gives an account of the expenses of a sewing-girl for board and lodging. At the lowest estimate, the trade council finds that 8 marks 50 pfennigs per week are needed to pay for lodging and to appease hunger. Thereto must be added, of course, a

multitude of expenses for necessaries of life, as for dresses, shoes, linen, soap, light, and for unavoidable incidental expenses. Consequently the above wages per week of a common female dressmaker hardly cover one-half of her necessities of life. Wherefrom is she receiving the means for the other half? Either from her family or from another source of industry.

Since, especially in Berlin, a great number of sewing-girls are thrown on their own resources, there must exist to a great extent a good or bad income besides the earnings by the needle. There are likewise decent ways of earning some additional perquisites, for instance, in the situation of a waitress, by leasing rooms, and furnishing board, occupations principally carried on by women of maturer age. But what are the young women going to do, without means, and not able to work, who have the greater desire for pleasure? The young miss forms male acquaintances, and suspiciously tends to prostitution, frequently ending in this abyss. The extremely low wages in Berlin have their cause in the fact that here more than anywhere else workingwomen congregate, knowing where and how to find additional perquisites.

The ladies who grow up in peace under the influence of a well-regulated family life are pleased when they can buy such cheap and yet such handsome white linen and dresses. They do not consider for one moment that the sewing-thread is moistened in tears, that the low prices are generally due to hunger and immorality.

This is indeed a sad picture of the fate of a large portion of the poor sewing-girls, yet it is not any worse than the condition of thousands of poor factory girls, who are often reduced and driven to prostitution by designing men through the instrumentality of their own companions.

GLASS-WORKS OF WALDHOF.

REPORT OF CONSUL MONAGHAN.

In consequence of large import duties being levied on plate-glass imported from France into the Grand Duchy of Baden, a French company established a branch house at Waldhof in the year 1853. This French colony, as it is called, has grown from very modest beginnings to an establishment of large proportions, manufacturing and shipping every year to all parts of the world something over one hundred thousand square meters of plate-glass mirrors. Not being able to learn anything about the methods employed in manufacturing, I devoted my time to making notes on the general management. In the village there are about 1,800 souls; of these 450 to 470 are employed in the works, there being two "gangs," a night and a day "gang."

TIME OF LABOR AND WAGES.

The day's labor is divided as follows: From 6 o'clock a .m. until 6 o'clock p. m., with half an hour for breakfast at 8 o'clock, and one hour for dinner, from 12 to 1 o'clock; or 10½ hours per day.

The pay-roll shows a payment of sums ranging from 58 cents to $1.17 per day. Nowhere in Germany do the working classes live as they do in America. They have neither as good clothing, tenements,

nor food. The whole of their wages would not purchase the food used in an American family of working-people.

Because the Waldhof company is a model establishment, the dwellings are of a much better order than one usually finds connected with such establishments in other parts of the country.

Three hundred and forty dwellings give lodging to the 1,800 inhabitants. These dwellings are well appointed and so arranged that each family has its apartments entirely separate and distinct from every other family. These dwellings are for the most part very simple, yet very convenient and very comfortable. A piece of land (a flower and vegetable garden) is attached to each dwelling; also a stable, in which a cow or a couple of goats may be kept. These dwellings are cared for, repaired, &c., by the company's workmen and at the company's expense, and are given to the people rent free.

GROCERIES AND PROVISIONS.

The Waldhof company have established grocery and provision stores in which the people can purchase all the necessaries of life at cost prices, *i. e.*, at only such an advance on cost prices as is sufficient to cover the wages of the men employed in the stores. The very best grade of goods are sold, the directors, superintendent, and overseers purchasing their household goods at the same store as the humblest workman. Purchasing large quantities, the company get them good and at bottom prices. Dealers find it to their interest to furnish the best from fear of losing such a good customer as this company is. The meat and provisions are of prime quality. If at the end of a month a balance is found on hand at the company's store after the wages are paid to the workman, a reduction takes place in all articles until the surplus is worked off into the hands of the people. The company will not take one copper of profit out of the stores.

THE SCHOOLS.

The public schools are conducted in a manner most admirable. Children *must* go to school until they are 15 years of age. It is very amusing at times to find groups of children speaking French and German alternately. Libraries of excellent books are provided for the amusement and instruction of the "help" who desire to read.

The "colony," originally French, is becoming, day by day, more and more German. Of course the old people still speak French. It is not unusual to find three generations working side by side—grandfather, father, and son. The place selected lies in the Neckarthal or valley, famous for its wine and corn. There is, perhaps, no more healthy spot in South Germany. There is a hospital, however, in the village, presided over by the gentle Sisters of Charity, whose untiring care of the sick sometimes effects cures where doctors had given up hope. These good ladies are also supported by this model company. Need I say that these people seem, nay, are, very happy, very contented? They are. They never think of emigrating.

Cost of some of the necessaries of life at Mannheim, to-day, May 19, 1887: Sugar, 8¼ cents per pound; coffee, 47½ cents per pound; roast beef, 15 cents per pound; beef-steak, 44 cents per pound; tea, 47½ and upwards; flour, 5 to 8 cents per pound; butter, 34 cents per pound; salt, 2½ cents per pound; beans, 5 cents; peas, 5 cents; lentils, 5 cents; nutmegs, $1.35; lemons, 27 cents and upwards per dozen;

oranges, 40 cents per dozen; asparagus, 50, 60, and 70 cents per bunch (a pound); potatoes, 1 cent per pound; salmon, 69 cents per pound; common fish, 10 cents per pound; figs, 23 cents; raisins, 46 cents per pound, and upwards; currants, 23 cents. I give these prices just as they were returned to me by parties sent out to take notes. These are the articles used in American workingmen's families; they are the things used in ordinary life, not of course in all cases and places, but as a rule in prosperous manufacturing villages. Here they are among the workingmen's luxuries. I am now speaking of my district in general.

J. C. MONAGHAN,
Consul.

UNITED STATES CONSULATE,
Mannheim, May 20, 1887.

GERMAN COTTON AND GLASS INDUSTRIES.

REPORT OF CONSUL MONAGHAN.

I spent a day at Oggersheim in the Pfalz or Palatinate, for the purpose of ascertaining, if possible, how a cotton-manufacturing concern could draw raw cotton out of the United States via Liverpool, card, spin, weave, dye, and finish it into cloth, transship it to the United States, pay duty, freight, commission, &c., and still make money.

The Oggersheim company employ 600 hands, and have two engines, a new one of 560 horse-power and as a reserve an old one of about 240 horse-power. The driving power is transmitted to the main shaft from the engine by means of thick, heavy, hemp ropes running over grooved wheels. To my question "Why hemp ropes and grooved wheels?" I received the answer, "Because, if one of the strands breaks, it can be removed, and work continued until night, when a new strand can be adjusted. Were the driving power a flat leather belt the mill would have to stop working for half a day if it broke. Then, besides," added my informant, "the hemp ropes are only half as dear as a leather belt would be."

Manila is most frequently used in making these ropes.

HOURS OF LABOR.

The help go in to work at 6 o'clock in the morning; get out for breakfast from half-past 8 to 9; have one hour for dinner, from 12 to 1; a half hour for lunch and fresh air, from half-past 4 to 5; and quit work at 7 p. m. Thus they spend eleven hours at constant labor. The division of the day's toil in the manner described above is productive of much better results both in the health and spirits of the help. The hard monotony of the dull routine is thus broken.

THE PAY OF THE HELP.

The pay of the help runs all the way from an average in some rooms of 30 cents a day to 50 cents in others. Weavers and mule-spinners, as in America, are for the most part paid by what they make, that being from 50 cents to $1.10 a day, the latter amount being

exceptional and only made in the case of a first-class mule-spinner. A mule-spinner's first and second helpers get 50 cents a day. The three men run one pair of mules, English make, of 840 spindles. The directors acknowledged that workingmen and women of the same grade in America were paid much better.

MACHINES USED.

Most of the machinery used, or at least a very large part, is of English make.

During the last year many old machines were taken out and replaced by new ones of the latest and most approved English make. I noticed a great many of Platt's machines, from Oldham, England.

THE GOODS MANUFACTURED.

This company makes, besides shirtings and ordinary cotton goods, a great quantity of cotton velvets, corduroys, and jeans. These are exported in large quantities to France, Italy, Austria, and the United States; to the latter country, cotton velvets especially.

The nap on the cotton velvet is all cut by hand. The cotton velvet sells for 28, 36, 43, and 47 cents per meter. It was noticed in the singeing-rooms that the velvet was drawn from ten to a dozen times, by rolls turned by hand, over the red-hot iron cylinders, such as are usually used in the singeing-rooms connected with dyeing establishments.

A method by which the dampness required for successful spinning is obtained may be of interest to American spinners. The method of projecting steam into the room, prevalent in American cotton-mills, may not have the merits of the system employed at Oggersheim. Here water-pipes lead up to a box-like arrangement which hangs from the ceiling. Taking a ladder and climbing to this arrangement, I found a stream of water projected forcibly from a pipe, turning a fan-like or windmill-wheel-like apparatus, the water discharging itself into a basin or large saucer-like receiver. Jets of water thrown against the fans of this rapidly revolving wheel are converted into vapor, which is projected through wooden openings in all directions. This vapor, mingling with the air of the spinning-room, soon gives it the necessary dampness. Being placed above, the fans force cool, damp air into the hot air which rises, thus keeping up a constant circulation. One could not help noticing the entire absence of that close and disagreeable smell that forever haunts the precincts inside and even outside of New England cotton-mills. The system of ventilation is almost perfect. This, with the happy arrangement of the working hours, accounts for the red cheeks and rugged appearance of the help. In this connection it is only fair to add that "hot biscuits, pies, and highly seasoned pastries," so common with cotton-factory operatives in the States, are unknown among the toilers here. Then, too, no such severe climatic changes are ever felt here as have made New England and a large part of the Northern Atlantic border famous. The Government looks very sharp, I am informed, after the sanitary regulations, not only in cotton-mills, but wherever human beings are employed. Most of the cotton used by this company is drawn direct from the Southern States, though sometimes the raw material and yarn are bought in Liverpool.

In the event of cotton manufacture being extended in the Southern United States all exports of cotton goods over the ocean are expected to cease. Upon this point the opinion was expressed that the Southern States were much better adapted to the manufacture of cotton than the Northern in many ways: (1) The climate was in its favor. (2) It would not be so drastic on the help, because large stone mills would offer much cooler and pleasanter places to work in than the open field under a Southern sun.

The advantages of saving the expense of baling, freighting, shipping, transshipping, &c., were pointed out in such a manner as to leave no doubt that with the growth of the cotton-textile industry in the South, the days of export of those materials from England and the Continent are numbered.

PRICES OF COTTON GOODS ON THE MANNHEIM MARKET.

Sheeting, double width, 23 to 33 cents per meter (39 inches); shirtings from 12 to 22 cents; half cotton, half linen, 42 cents per meter; colored cotton, 15 to 16 cents per meter; cotton cloth used for toweling, 16 to 17 cents; finished cotton towels, $3; shirts, ready made, $11; dozen pairs ladies' cotton stockings, $3.75 to $4; dozen pairs men's socks, $3; cotton underclothes, $1.30 and $1 a suit; a cotton tablecloth with 6 cotton napkins from $1.25 to $7.25.

For the purpose of comparison I add the prices of linen goods: A meter of linen from 30 to 95 cents; sheetings from 41 to 51 cents; dozen linen handkerchiefs from $1 to $4.25; dozen shirts from $24 to $12; dozen collars from $2.75 to $1.

CUSTOMS DUTIES ON COTTON IMPORTED INTO THE GERMAN EMPIRE.

Raw cotton, carded, combed, and colored, in the raw state	Free.
Cotton wadding	$0.357
Cotton yarn, mixed or unmixed:	
Single thread:	
Nos. 1 to 17 (English measure)	2.85
Nos. 17 to 45	4.28
Nos. 45 to 60	5.71
Nos. 60 to 79	7.14
Above 79	8.56
Double threads:	
Nos. 1 to 17	3.57
Nos. 17 to 45	4.998
Nos. 45 to 60	6.43
Nos. 60 to 79	7.85
Above 79	9.28
Single or double threads, bleached or colored:	
Nos. 1 to 17	5.71
Nos. 17 to 45	7.14
Nos. 45 to 60	8.56
Nos. 60 to 79	9.98
Above 79	11.42
Three and more threaded yarn, once or more twisted, raw, bleached, colored	11.42
Double threaded, twisted or spun yarn, raw, bleached, colored, prepared for sale, yarn of every kind (cotton)	16.66
Goods manufactured from cotton alone or mixed with metallic threads, wool, or other animal textile products, pay:	
Undressed (Roh.), thick, heavy goods, excepting velvets	19.40
Thick, heavy, bleached goods	23.80
All classes of cotton goods not coming under 1, 2, and 6, such as hosiery, hangings, passementerie, and cloth for covering and making buttons, also mixtures of cotton and metal threads	28.56
Window-hangings, bleached and prepared	54.74
Satinets, muslins, tulle, gauze, in so far as they do not come under 1, 3, and 4.	47.60
Laces and knit goods	83.30

RECEIPT OF WORKINGMAN'S EXPENSES FOR FOOD.

The following table refers to a receipt which appears in a workingman's cook-book published in Elberfeld. This book has found great favor among manufacturers. This receipt is intended to cover the needs of four grown persons. The expenses are 2.81 marks, or about 67 cents.

Day.	Articles.	Quantity.	Cost per article.	Total cost.
		Pounds.	*Pfennige.*	*Pfennige.*
Sunday	Sauerkraut	3	9	44
	Potatoes	3	15	
	Bacon	¼	20	
Monday	Peas in soup	¼	25	47
	Potatoes	6	18	
	Fresh pigs' bones	1	4	
Tuesday	Barley in soup	¼	10	35
	Potatoes	6	18	
	Sausage broth or buttermilk		7	
Wednesday	White beans in soup	1½	24	43
	Potatoes	5	15	
	Oil and onions		4	
Thursday	Potatoes	7	21	45
	Onion sauce, with oil		4	
	Panhas	1½	20	
Friday	Potatoes in soup	4	12	39
	Wheat meal in a pancake	1	20	
	Fat (lard) for soup, and cooking-oil		7	
Saturday	Rice in soup	¼	9	28
	Potatoes	5	15	
	Sausage broth	*1	4	

*Quart.

This makes a total of 67 cents. A mark equals 23 cents 8 mills ($0.238).

It is not to be supposed that many of the workingmen do not have better food than the above table provides; but it can be safely asserted that the living of the German working classes is very simple and can in no way compare with that of the same classes in any part of the United States. The economy with which they prepare and get the most out of food is born of necessity. Having written so often about their preparation of food, I need only mention here that stews prevail among the Germans where "fries" prevail among the toilers of America.

J. C. MONAGHAN,
Consul.

UNITED STATES CONSULATE,
Mannheim, May 11, 1887.

JEWELRY WORKS OF PFORZHEIM.

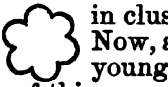
REPORT OF CONSUL MONAGHAN.

With a view to ascertaining in what way, if any, German jewelers excel those of the United States, I visited the famous old city of Pforzheim in my district. The following is the result of my observations:

All kinds of jewelry are made, ranging from 18-carat gold work to the thinnest possible plate, or "Duplex," as the Germans call it. In no way is the work superior to what I have seen in America, at least

in excellence of finish; the methods of production being very similar, except that the German has this advantage, that he is provided with a very excellent "Gewerbe" or technical school, in which children intended for employment in the jewelry shops receive a very thorough theoretical training long before they see the inside of a factory. These schools are presided over by skilled professors. Designing, drawing, practical chemistry, and enough metallurgy to be of use to the pupils in their work are taught in these schools. Even after the boy or girl leaves the school and goes to work in the factory, he or she is allowed to take an advanced course evenings in the school.

Oftentimes men, young and old, are found taking special courses.

In the workshop an excellent system prevails. It is this: instead of each workman being placed at a bench with the wall in front of him, as with us in America, the help are gathered in clusters around large benches peculiarly arranged, thus:  Now, at this bench will sit one or two skilled workmen with young lads around them under their direction. The advantage of this, apparent at once to any foreman of a jewelry shop, is to reduce loss and waste to a minimum, besides the advantage of having the apprentices learn more rapidly from watching the older hands. Then the skilled workman, compelled every time he raises his eyes to see what the learners are doing, detects in a moment the slightest fault. The above rough diagram will serve to give an idea of the bench's form.

The soldering, scraping, polishing, &c., is done about in the same way as our workmen do it, with this difference, that girls here do the polishing at from 35 to 50 cents per day, while with us a man (girls seldom if ever polish) commands, and usually gets, $2.75 to $3.50 per day.

The polishing-machines here seemed cleaner than ours, the girls being well protected from the flying crocus. The stampers and presses are run about as ours are run, though I could not help noticing that a pressman with us would turn off twice as much work in an hour as a pressman here. Each establishment employs its own designers and die-sinkers, thus reducing expenses, at the very outset, to much below those of an American shop, where the designs are many times bought from specialists and the dies are sunk outside. In one shop, where I saw 5,000 dies of 5,000 different patterns, the average price per die was $1. My impression is that the average price of such a collection in Providence or Attleboro would be $10. In this difference of cost may be found one of the many advantages of the technical schools. I may state here that instruction in the schools is as good as free; the manufacturers paying $2 a year for pupils whom they intend to employ. An apprentice must serve five years before being admitted into the ranks of the skilled workmen; he gets 50 cents a week the first year, $1 a week the second, $1.50 the third, and so on until his five years are up. Everywhere I went I heard complaints of manufacturers that trade was lost to them in the United States, because hundreds of skilled workmen went to New York and New Jersey and set up shops, and made as good goods as ever were made in Pforzheim, and sold them cheaper than they could.

PLATE OR "DUPLEX."

The manufacture of plate and plated ware is growing into a very extensive branch; people preferring to buy plated ware of 10, 20, and 30 grade—18 carat—to poor gold of 8 and 10 carat. The preparation

of the plate is very similar to the methods prevailing in America. Thick copper or silver plates are prepared with a perfectly smooth, regular surface. French louis d'ors are cut up and melted down, run off into plates, rubbed, filed, and rolled out to the size of the receiving plate, attached to the same by means of some specially prepared, secret, chemical preparation, put in clamps, and then put into a very hot fire of charcoal. Here, under the trained eye of the furnace watcher, it remains until little excrescences, or bubblings along the line of juncture indicate that it is "done," when it is taken out and left to cool; after which the gold and silver, now "made one," is rolled between rolls, grading from ponderous heavy ones to comparatively light ones. What came out of the furnace a thick piece of combination metal, leaves the last rolls a thin, long, smoky-like string of plate 50 to 75 feet in length. This is then tempered over flaming gas-jets, or annealed, rather; after which it is rubbed, cut into strips, and sent to the stampers, where it is pressed into various designs; is then cut and trimmed, and after various manipulations comes into the salesroom ready for the world's market. Just at present there seems to be a very active trade springing up in this class of goods. Besides the plated ware, I found the more advanced shops employing batteries for the production of electro-plated ware. One thing pleased me more than any other, and that was to see machines take a long, flat strip of plate, pull it through a hole in such a manner as to turn out a hollow gold plate wire, the gold on the outside and the joining line invisible, no solder being used. I never saw any to equal it in America; true, our workmen turn the wire out, but it is soldered, if I am rightly informed; besides, the directors here seemed to speak with considerable pride as they showed me this triumph of mechanical skill. Look as closely as I would, the seam was invisible. To secure excellent finish the concealment of the seam is very much desired. I found one shop busy turning out thousands of "images," bronze plate busts of England's Queen Victoria, the Kaiser, the Crown Prince, von Moltke, and Bismarck. The skill with which these were finished was very fine. The director claimed to have some process by which he secured the best results when he could get a fine terra-cotta "image." I was unable to learn as much as I desired of this interesting process.

Everywhere I went, I must state, I was treated very courteously, that is, wherever I was allowed admission. In one or two places I found huge hydraulic presses used in pressing the plate together either before going into or after coming out of the furnace.

THE MARKETS.

The markets of the world are supplied from this quaint little city situated among Baden's hills at the junction of three rivers, the Enz, the Wurm, and the Nagold.

Thousands of dollars' worth of jewelry with the pretentious name of "Parisian" had its origin in this humble and unpretending city. It was instructive as well as pleasant to go through the sample-room of the largest concern and see the goods destined for the adornment of the people and tribes of all the earth. One need hardly be told that certain boxes were destined for Eastern, others for Western, and still others for Southern consumption.

The jewelry going to the Orient was distinct from that intended for Spain and the Spanish countries of South America. I could not help a sigh of regret as I learned of the very extensive trade being

carried on with Mexico and the whole South American continent. It was an interesting supplement to a study in ethnology to study the different designs intended to meet the tastes of people at so many different parts of the earth. Here as in so many branches the tireless and enterprising Teuton has agencies everywhere. I heard many complaints about trade with the States being cut off by our "tariff." I have no doubt that a reduction of rates 10 or 15 per cent. would result in flooding our market and stimulating the German trade. What the results would be ultimately I am not able to determine. Unlike our jewelry centers, the Pforzheimers have work all the year round. This is in a large part due to the extensive market enjoyed. We should study the tastes of South American and Oriental peoples and market our goods among them. American work seems to me to excel in perfection of detail and grace of finish.

SUPERVISION.

The goods, at least the "plate," must be what they pretend to be. A man runs a great risk who sells No. 80 or 60 plate for No. 40 or 30. There are test places under governmental control. I could not help noticing the democratic spirit prevailing among all classes of help and employers; a friendly smile on the face of the directors as we approached the benches of the workmen was always answered by a happy smile and a cheerful nod by "all hands." A happy and just spirit of emulation exists among all the workmen. A boy with skill, no matter how poor, finds in Pforzheim a thousand friends to help him to the highest and fullest development. As in all branches of labor in Germany, the wages paid in no way equal those paid to the same class of help in the United States. Nevertheless, if asked what opportunity we have to open trade in South America to compete with German goods, I should unhesitatingly declare in favor of a trial, with firm belief in success. I could not help feeling gratified at hearing the very best opinions expressed in regard to American products in this class of goods, nor was I less happy when told that some of their best workmen go to the United States, enticed by the better wages and increased opportunity to "get somewhere in the world."

I may be pardoned for referring again to the matter of skilled workmen and their apprentices. In all branches, die sinking and cutting, as well as in putting the jewelry together, the skilled workmen sit at grooved benches with three or four "'prentices" near them.

Knowing what immense losses occur in all branches of the jewelry trade from "abortions," or bad work from learners, I cannot help pointing out as forcibly as possible a method that seemed to combine so much of advantage with so little of loss as that which I saw at Pforzheim. Bad work is almost impossible while the skill of the old workmen is transmitted from hour to hour and from day to day to those who are to come after them, as skilled workmen, to sustain the reputation that has made Pforzheim rich and famous in two continents and a dozen parts of the world.

J. C. MONAGHAN,
Consul.

UNITED STATES CONSULATE,
Mannheim, June 15, 1887.

THE TARIFF QUESTION IN HOLLAND.

REPORT OF CONSUL ECKSTEIN.

The Association of Manufacturers of the Netherlands (*Vereeniging van en voor Nederlandsche Industrieelen*) has recently inaugurated a movement for the object of influencing the Government and the States-General in favor of speedy legislation upon the subject of the tariff on imports and for the purpose of "protection" to home industries.

Towards the accomplishment of these ends the above-named organization has issued "a public notice" (*oproeping*) calling therein attention to the defects in the existing tariff, ascribed thereto the now prevailing unsatisfactory condition of most all of the industries of the country, and whereby it is proposed that at an early day and at some centrally located place a large meeting be held, consisting of all such persons as sympathize with the movement, and for devising the necessary steps to be taken to make it successful.

A translated copy of this "call" or "public notice" is herewith inclosed for the information of the Department, or for any such use as, in its judgment, it might possibly be made to serve the interests of certain classes of our people.

I refrain from expressing any opinion upon the situation and circumstances which purport to have led to the action of the above-named "association" or comment in any way upon the contents of the "call" it has issued.

At the same time I would observe, if permitted to speak figuratively, that the "high tariff" or "protection fever" which has been and still is raging in the neighboring countries of France, Belgium, and Germany, threatens the spread of contagion from over the southern and eastern borders into Holland, and it remains to be seen whether it will become epidemic in this country to the extent of demanding and producing governmental and legislative action.

DAVID ECKSTEIN,
Consul.

AMSTERDAM, *May* 23, 1887.

IN BATTLE ARRAY.

The national industry lives in a most difficult time.

It seems that the last period of the battle for life has appeared for many of its branches.

Others shall not escape a similar fate, hanging over their heads.

Foreign competition, steeled by protection, equipped and encouraged to a decisive battle for the overpowering of a market for the world, even appears to drive aside the most natural productions of the native industry, even as it was the case these last forty years, with velvet and silk, with window and looking glass, with pins and needles, with guns and swords, with springs, axes, and wheels, with paper hangings and playing cards, with cloths and other woven articles.

Now flour has its turn. Next cattle and meat; in one word, the aim of adjacent and more distant countries appears daily more openly.

Even England, that country apparently most inclined towards free trade, tries the very utmost to uphold and maintain the here and there tottering national industry by artificial means, though still fascinated by the glorified results of free-

trade ideas, but which were first brought into practice when it was sure of its supremacy in many branches of industry.

We are not surprised at this turn of events. When it was still time to take preventive measures, we have tried and tried again everything in our power. A great majority has met, if not worse, with a compassionate shrug of the shoulders.

The only thing now still left us to try, is to knock at the door of our friends and votaries for the free-trade school, and though it be at the eleventh hour, to combine with them in obtaining as soon as possible the application of those measures which the celebrated men of 1850 left in the hands of the head of the state to decree, even without further concurrence of the States-General, for the preservation of our own industry, if it unexpectedly might even appear that the commercial laws of other states were changed to the injury of the Netherlands.

The facts which our Government and legislation of 1845–1850 foresaw as possible are now existing.

The industry of the Netherlands is menaced with a total ruin by their oppression.

It is therefore of the utmost importance to bring those means in practice which the legislation then reserved.

May we hope for any success, ere it be too late for many, then we cannot tarry any longer; not much talking, but manly, courageous, and, above all, unanimous deeds are requisite.

We therefore propose a great general meeting, to be held in the center of the country, date and place to be fixed at a later period.

We will take the charge of preparing everything requisite for such a meeting.

We only request those who are of our opinion that, on the part of all promoters of our native industry, steps should now be taken in the indicated direction with the legislation and States-General, so that nobody may have to repent by our negligence; to show their assent by sending a postal card before the 23d of this month.

The board of the association of and for manufacturers of the Netherlands.

EM. ROECHLIN, *President.*

DR. C. C. E. D'ENGELBRONNER, *Secretary.*

THE HAGUE, *May* 10, 1887.

SUPPLEMENTARY REPORT OF CONSUL ECKSTEIN.

I transmit herewith a translation of an extract from a circular issued by the Association of Flour Manufacturers of the Netherlands, inviting all manufacturers of the country to be present at a meeting to be held at Utrecht, on the 16th of next month, to consult as to the means necessary to be employed to save the industries of this country from decline or ruin which, according to the statements of the said organization, threatens them.

DAVID ECKSTEIN,
Consul.

AMSTERDAM, *May* 24, 1887.

[Translation.]

The Netherlands Association of Millers has issued a circular directed to the manufacturers of the country, inviting them to a meeting to be held on the 16th proximo in the building for arts and sciences at Utrecht.

The administration of the said association calls attention to the following:

It is not only the flour-milling industry that is found in so embarrassing a condition.

It is well known that very nearly the entire industry of the Netherlands is seriously in danger in consequence of the trade policy which is being pursued by foreign countries.

For the products of the industries of the Netherlands entry into foreign markets is obstructed, and in their own markets Dutch manufacturers cannot compete against foreigners, who, through their gains which "protection" insures them in their fatherland, can sell their surplus stocks here at prices so low that competition becomes impossible.

By united efforts we will endeavor to resist the danger which threatens us, and, therefore, we propose consultation and discussion of the means necessary to be employed to accomplish our object.

For the convenience of participants in this exchange of views, the following stated questions will be placed before them, and which they are expected to answer in writing:

(1) What articles are being produced by your industry?
(2) What is the number of factories in this country engaged in your industry?
(3) What is the number of workmen?
(4) What is their average pay per week?
(5) What is the value of the yearly production?
(6) At how much do you estimate the capital invested in the buildings and equipments of the factories?
(7) At how much do you estimate the entire working capital?
(8) Is your industry engaged in working for the home or foreign markets?
(9) If for foreign markets, whither go your exports?
(10) Is your industry hindered in carrying on the export trade? and if so, since when, and in consequence of which foreign laws?
(11) Which countries are in our markets your principal competitors?
(12) Is competition supported by any laws in foreign countries? If so, which are they?
(13) Can your industry maintain or assert itself, notwithstanding the protection enjoyed by your competitors abroad?
(14) If not, what Government action or measures do you consider required in defense of your industry?
(15) Do you believe the levying of duties on imports necessary? and if so, to what amount?

EMIGRATION FROM GREECE TO THE UNITED STATES.

REPORT OF CONSUL MOFFETT.

Within the past few weeks many applications have been made to me for transportation to the United States by intending Greek emigrants. The persons applying for aid or information are young men, not mechanics, or agriculturists, and tell the same story, viz: "We have been told of a great demand in America for Greek laborers; that money is to be had in abundance, and that the American Government will furnish transportation." To my surprise I learned on inquiry that many had actually gone to the United States with such views, having obtained the necessary funds by borrowing or by selling or mortgaging what few possessions they may have had. I have tried in vain to discover the source of their delusion. The Greek consul-general in New York has given full and timely warning, and the Greek newspapers have given publicity to his words, but still the emigration goes on, and is likely to increase.

I do all I can to undeceive these people, and to let them know the truth, but I see only one here and there, and, speaking to them through an interpreter, find it difficult to get them to understand. Then I am told that the runners of the emigration lines, knowing that no encouragement will be given, try to keep their victims from applying at the consulate. As a class there could hardly be more undesirable emigrants. They go without means, or with barely enough to land them in New York. They are not skilled workmen, and have no purpose whatever to settle down and become citizens. For the most part they are dirty, and are ready to live like dogs, and their hope is to save up in a few years what to them will seem a fortune, and then return to their homes and live on the interest of their money.

Wishing to get the most reliable information on this subject, I asked our consular agent at the Piræus to prepare a report, which I have the honor to inclose. Mr. McDowall's intimate knowledge of this class of people, gained during a business connection of more

than 20 years, his perfect command of their language, and his personal popularity, all qualify him to speak with confidence, and entitle his opinions to the utmost respect. I would call special attention to the suggestion offered in regard to passports, which appears to me to be of great value, not alone for Greece, but for the whole stream of European emigration. It seems to me that consular supervision offers an immediate and ready check on undesirable emigration, the emigration of that class which goes to crowd our charitable and penal institutions. The consul can always obtain information in regard to the status of the intending emigration, which would be of very great value, and here in Greece the application of such supervision is easy. No Greek can leave the country without being provided with a passport, and all that would be needed is the requirement that passports of intending emigrants for America shall have the visé of the American consul. Mr. McDowall's suggestions on this point seem to me to be worthy of special consideration.

WM. H. MOFFETT,
Consul.

UNITED STATES CONSULATE,
Athens, May 24, 1887.

EMIGRATION FROM PIRÆUS TO THE UNITED STATES.

BY CONSULAR AGENT McDOWALL.

Of late emigration from the Piræus to the United States has increased very considerably and appears to be still on the increase.

The emigrants passing through Piræus are principally from the province of Laconia, in the Peloponnesus. I estimate that three hundred persons, all males, have left this port during the past two months by French and Italian steamers for the United States.

No encouragement is given by the Greek Government to the exodus of the people of one of the most sparsely populated provinces of this country; in fact, the Government rather discourages emigration, although no obstacles are put in the way of those desirous to leave. The Greek press, on the other hand, sends up a wail on the departure of every new batch. The dissuasions of the press are founded on reports from the Greek consul at New York on the sufferings and hardships of Greek emigrants landed there destitute, or almost so, last winter. Nevertheless, the stream of emigration continues and increases as the summer advances.

I have endeavored to find the cause for this emigration, and on questioning the emigrants have invariably received as reply: "The chance of bettering our position." There being no work for them in their native villages, they leave their women and children to plant sufficient corn, &c., for their sustenance while they are away trying to make a little money.

The emigrants from Greece are neither agriculturists nor tradesmen, and on reaching the United States settle down in large centers like New York, Chicago, &c., and commence petty trading—selling cigars, flowers, sweets, &c., on the streets, or keeping lodging and boarding houses for seamen, and small dram shops, &c. Doubtless many of them are honest, toiling people in their line, and others are simply grubs on society at large. They are all very careful about money, and will live on next to nothing in order to save and send money to put out at interest (or usury) in their native villages, until they consider they have sufficient to return and live on; of course a sum of $2,000 is a fortune for them, and the interest on this sum, lent out at 20 or 30 per cent. per annum, produces enough for them to live on.

The majority of the emigrants leave here with simply sufficient means to land them in New York, and this sum is generally borrowed by mortgaging any little property they have, and for the future they trust to luck and their own astuteness.

On account of their admittance into the United States without a passport, they seldom or never come near this consulate, and all information obtained about them is gleaned from them while standing round the shipping offices before they embark.

Seeing they are all bound to be provided with a Greek passport before they can leave the country, I think it would be a good thing if they had to present themselves at the consulate for a visé to their passports, which would afford opportunity for close examination as to their antecedent, condition whether paupers, criminals, or provided with means, and to what extent; also whether they had friends or relatives settled in the United States, and if so, get the names and addresses of such relatives. A record of the information thus obtained to be kept and copies sent to the Department of State and collector of the port of entry, who would thus be advised, previous to arrival at his port, of the condition and social status, &c., of the emigrants.

The majority of the emigrants from Greece cross the Atlantic in Italian and French steamers, sailing from Palermo and Marseilles; the branch steamers of these lines taking them from Piræus to those central ports.

A. C. McDOWALL,
Consular Agent.

UNITED STATES CONSULAR AGENCY,
Piræus, May 10, 1887.

PROTECTION OF INVENTIONS IN SWITZERLAND.

REPORT OF CONSUL GIFFORD.

The Swiss people adopted on the 10th instant an amendment to the Federal constitution by which the power to legislate in regard to patents is conferred with certain restrictions on the General Government. As is well known, Switzerland does not at present afford any protection to inventors, having hitherto combated, both in theory and practice, the ideas which prevail in most other civilized countries on this subject. The change contemplated but not assured by the amendment is the result of an agitation which began many years ago. In 1882 an amendment similar to the present one was submitted to the people, but was defeated by a large majority. Several branches of industry, notably those occupied with the production of textiles and paints and colors, vigorously opposed the protection of inventions, holding that any general patent law would be detrimental to their interests. But the question was further discussed in the newspapers, among the people, and in the Federal Council and legislative bodies with that thoroughness which is characteristic of the Swiss people.

The result was the adoption of the new amendment by a vote of 192,000 to 57,000. To secure this result, however, it has been necessary to make large concessions to the opposing interests. Textiles, dyes, and paints cannot be included in the proposed legislation. Moreover, the patent law to be framed in conformity with the amended constitution must only provide for the protection of important inventions, to the exclusion of trifling improvements and inconsiderable novelties. In short, it is proposed to give the patent office as little to do as possible, and to restrict the expenses and the number of employés to a minimum.

The task of the Federal Government in framing a law conforming to the constitution will be no light one. And, once framed and adopted by the legislative bodies, such a law will not go into effect, as a matter of course, on the day determined in the act itself, but will continue for the space of ninety days subject to the contingency of a *referendum*, that is, to submission to a popular vote on the written demand of 30,000 persons entitled to the right of suffrage. It is already predicted that unless full force is given to the restrictive clauses of the

constitution the people will reject the law when it comes before them. It is even said that the recent partial success of the friends of the patent system was due rather to the negligence of the opposing party and a consequent light vote than to any change in the opinions of a majority of the people, the general feeling having been that there was no danger of a reversal of the verdict of 1882.

The result will have a certain importance for inventors and owners of patents of mechanical contrivances in the United States. They are now wholly without security in this country, while the new legislation, even if as rigorously restricted as proposed, would give them protection for those inventions and improvements which are most frequent and most important in America.

GEORGE GIFFORD,
Consul.

UNITED STATES CONSULATE,
Basle, July 24, 1887.

THE MINING INDUSTRY OF LIEGE.

REPORT OF CONSUL PRESTON.

The year 1886 was a most disastrous one for the coal-mining industry of Liege. The owners or managers of the mines could not keep on with their production without making new concessions to the workmen, and at the same time prices of coal sunk lower than ever before. Wages had as yet suffered but a small reduction in consequence of the lowering of the prices of coal, when, at the end of March, the riots broke out among the men, which caused so much trouble in the country.

The disorders which have occurred show the fatal influence exerted by socialist and anarchist teachings on the thinking working population. The disorders have been suppressed, but the agitation continues, kept up by an active propaganda, the success of which is more manifest every day.

The dangers of the situation are great, as the country needs all its forces in order to compete with other nations which are richer in minerals and are less exhausted.

The Government has understood the situation and has confided to a commission the study and the elaboration of laws destined to improve the condition of the working classes. It is, therefore, hoped that some wise, generous, and liberal measures will be adopted to bring content to the intelligent workingmen who see the necessity of economical and social order.

The Government has further (in order to render more direct and practical help to the laborers in these industries) consented to make reductions in transportation of coal from the interior, which had the immediate effect of diminishing, to a great extent, the importation of German coal. Besides which it has instituted a commission to study how to further develop the mining industry.

Exporting countries, as Belgium is to-day, having but limited natural resources, placing their industry in the least favorable condition of production, should avoid every possible measure, direct or indirect, which raises the price of exportable products. Their interest commands them to be free-traders.

It seems to be a necessity of the situation that in such a country wages should remain low, and it is particularly hard to avoid certain periods of depression, which cause discontent among the working classes.

The French and German coal miners are as well supplied with the most improved tools and machinery as the Belgian; they pursue the progress of the mining art with the same care and attention, and the only way to meet the situation seems to be to accord cheap transportation in order to enlarge the market. An effort is being made by the authorities in this direction, both by rail and by water. Evidently no industry can be a public charge, and the coal mines are not yet at this point. If they do not enrich their shareholders, they supply the means of living to a large number of workingmen, and thus contribute to the general welfare, and are a source of life to other industries. There are still coal miners who are rich enough to face all the difficulties, but many of them have had a hard struggle to support existence.

The year 1886 ended better than it began; towards the latter part of the year a movement manifested itself to render work more active, but has not yet exercised an influence sensibly affecting prices. The important orders for brass and old iron from the United States had quickly absorbed the stocks of the blast furnaces. The impulsion that ensued extended to the rolling-mills, and renewed the trade in the coke and coal industry. The table which follows shows the difference in the general situation between 1885 and 1886.

Items.	1885.	1886.	Differences 1886.
Total workmen	22,464	22,906	558—
Wages paid ..... francs..	20,735,730	19,849,600	876,130—
Mean annual wages	866	866	17—
Production ..... tons..	4,071,835	4,099,343	27,508+
Value ..... francs..	36,984,350	34,627,420	2,356,930—
Ordinary expenses ..... francs..	31,635,400	30,345,040	1,290,360—
Extraordinary expenses ..... do....	3,542,350	2,565,720	976,630—
Totals	35,177,750	32,910,760	2,266,990—
Mean average price per ton ..... francs..	9.08	8.45	0.63—
Mines that gain ..... number..	38	30	3—
Profit on mines that gain ..... francs..	3,120,850	2,988,070	132,780—
Mines that paid loss ..... number..	20	22	2+
Loss ..... francs..	1,314,250	1,221,400	92,850—
General result ..... do....	1,806,600	1,716,670	89,930—
Result ..... per ton..	0.448	0.419	0.094—

The gross production of the coal mines in 1886 was 4,099,343 tons; this is 27,508 tons more than in the year 1885, when the maximum of production was reached.

The more active demand of the last few months of the year permitted the disposal of a large part of the stocks, which amounted to 171,800 tons on the 1st of January, 1886, and was reduced to 119,299 tons on the 31st of December; the consumption of coals in the mines having been 239,685 tons. The sales amounted to 3,859,658 tons, which is 102,173 tons more than in 1885.

The following table shows the fluctuation in the production and quality of coals in 1885 and 1886, and the sales in those two years:

PRODUCTION.

Quality.	1885.			1886.		
	Fifth arrondissement.	Sixth arrondissement.	Province of Liege.	Fifth arrondissement.	Sixth arrondissement.	Province of Liege.
Coals:	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Poor	370,140	92,657	462,797	361,050	89,522	450,572
Medium	869,120	671,867	1,540,987	982,410	652,749	1,595,159
Prime	1,107,750	960,301	2,068,051	1,189,050	934,562	2,068,612
Totals	2,347,010	1,724,825	4,071,835	2,422,510	1,676,833	4,099,343

SALES.

Coals:						
Poor	339,315	85,416	424,731	340,500	83,304	423,804
Medium	795,390	640,116	1,435,506	857,890	622,440	1,480,330
Prime	996,510	900,738	1,897,248	1,062,910	892,624	1,955,534
Totals	2,131,215	1,626,270	3,757,485	2,261,290	1,598,368	3,859,668

On account of the mine Burton having been abandoned, the number of active mines in 1886 is reduced to 52. Among these, 30 have realized a profit of the sum total of 2,938,070 francs, while the other 22 have suffered a loss of about 1,221,400 francs. The general result is, therefore, a profit of 1,716,670 francs, which is 89,930 francs less than the previous year. Prices have not been as low for thirty years. The sum spent for preparing works and for the first establishments was in 1886 but 2,565,720 francs, about 1,000,000 francs less than the expenses of 1885. To find as low a figure we have to go back to 1864, when the production was not yet 2,221,000 tons, a little more than half of the production of to-day.

We give here the total sum of the expenses of the mines and the proportional cost per ton of producing the coal for the past five years:

Year.	Expenses of mines.	Cost of production.
	Francs.	*Francs.*
1882	4,979,170	1.24
1883	5,680,500	1.34
1884	3,896,900	0.96
1885	3,542,350	0.85
1886	2,565,720	0.62

The largest proportion of profit in the mines is on the left shore of the river Meuse, 1,318,120 francs, against 398,550 francs on the right. The difference may be attributed to the larger proportion of prime coals produced by the mines of the left shore; in fact, this large production was the cause of the low prices, as shown by the following table:

Quality.	Value per ton of coal.		Differences.
	1885.	1886.	
Coal:	*Francs.*	*Francs*	*Francs.*
Poor	8.37	8.07	0.30
Medium	9.02	8.62	0.40
Prime	9.26	8.40	0.86
Average	9.08	8.45	0.63

FABRICATION OF COKE.

The fabrication of coke in 1883 was 611,360 tons, and in 1885 was 489,539 tons. In 1886 it increased to 509,644 tons, in spite of a sensible diminution of the export to France. This unfavorable circumstance has been compensated for in the contracts which the Belgian coal miners made with the Grand Duchy, a syndicate of German owners having been formed to raise the price of coal in that market, and thus make the competition easier. This syndicate, however, had but an ephemeral existence.

The production of the manufactories has also been favored by the extension of the brass industry in Belgian Luxembourg, where there are at present four furnaces in active operation.

The following table shows the production of coke in the province of Liege for 1886:

Items.	Fifth arrondissement.	Sixth arrondissement.	Province of Liege.
Furnaces:			
Active.....number..	296	1,048	1,344
Inactive.....do....	240	451	691
Total.....	536	1,499	2,035
Number of workmen.....	150	437	587
Consumption of coal.....tons..	208,640	500,995	708,635
Production of coke.....do....	147,881	361,763	509,644
Mean value of coke per ton.....francs..	11.67	12.86	12.52

The following table gives the exports of coal and coke direct to foreign countries from the province of Liege. The figures are given by the manufacturers themselves. In explanation of the table we state that in the recapitulation column the amount only of coal necessary to produce a ton of coke is taken, which is calculated at 70 per cent. The quantities given are tons.

Years.	France.		Germany.		Holland.		Switzerland.		Italy.		Over sea.		Total export of coal.	Proportion of export to production.
	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.		
														P.ct.
1877	221,000	17,850	12,000	140,000	82,200	1,610	.....	60	.....	.....	12,100	.....	555,185	18.1
1878	273,300	85,750	11,400	79,170	87,400	1,700	.....	.....	.....	.....	14,800	.....	625,000	19.6
1879	262,800	88,550	18,400	65,100	95,800	1,890	.....	.....	.....	.....	.....	.....	599,200	18.2
1880	246,804	120,237	24,853	76,350	105,388	2,564	598	.....	.....	.....	730	.....	708,196	19.8
1881	340,863	108,640	49,065	101,968	91,879	1,290	7,400	.....	.....	.....	1,550	.....	795,288	12.5
1882	305,079	159,018	32,120	92,987	85,498	2,740	7,360	....	170	....	2,670	350	811,019	21.9
1883	299,041	137,270	36,420	91,860	108,022	1,680	11,700	....	.....	.....	28,605	.....	813,445	19.4
1884	372,251	89,261	43,646	64,757	91,975	1,435	15,269	80	.....	.....	84,690	.....	780,050	20.7
1885	445,466	113,972	33,082	63,910	109,044	1,058	18,400	200	.....	.....	37,255	1,300	901,182	23.9
1886	427,257	83,705	39,735	82,888	109,695	880	20,790	....	.....	.....	48,781	2,500	898,884	23.6

As an interesting addition to the above report I give my translation of a table showing all the steam manufactories in the province of Liege.

WM. S. PRESTON,
Consul.

UNITED STATES CONSULATE,
Liege, August 5, 1887.

The following table gives the number of men, women, and children employed in the coal mines of the province of Liege in the year 1886:

Items.	Fifth arrondissement.	Sixth arrondissement.	Province of Liege.
Workmen employed in the interior of the mines:			
Men	8,998	6,499	15,497
Women	76	119	195
Children under fifteen years of age:			
Boys	1,018	731	1,749
Girls	8	15	23
Total	10,090	7,364	17,454
Workmen employed on the surface:			
Men	2,290	1,384	3,674
Women	673	345	1,018
Children under thirteen years of age:			
Boys	270	137	407
Girls	265	88	353
Grand total	13,588	9,318	22,906

Steam machinery in the province of Liege, December 31, 1886.

[Surface of heat given in meters.]

For what purpose used.	Judicial arrondissements.												The province of Liege.					Low-pressure apparatus.		Apparatus of foreign makers.	
	Liege.					Verviers.				Hery.											
	Motors.		Simple generators.	Active steam boilers.		Motors.		Simple generators.	Active steam boilers.	Motors.		Simple generators.	Active steam boilers.		Motors.		Simple generators.	Active steam boilers.			
	No.	Horse-power.	No.	No.	Surface of heat.	No.	Horse-power.	No.	No. Surface of heat.	No.	Horse-power.	No.	No.	Surface of heat.	No.	Horse-power.	No.	No.	Surface of heat.	No.	Horse-power.	No.	Horse power.
General works.																							
Coal mines:																							
Extraction	102	11,614	....	323	17,968	5	281	....	17	999	8	120	....	18	309	115	11,905	....	358	19,276	....	....	....	....
Exhaustion	62	11,578	....	129	6,443	3	241	....	5	244	5	97	....	3	108	70	11,916	....	137	6,795	....	....	3	88
Aeration	78	1,923	....	29	1,116	3	12	....	....	....	....	....	....	....	....	81	1,935	....	29	1,116	....	....	....	....
Divers uses	232	2,805	....	51	1,831	4	11	....	....	....	5	10	....	....	....	241	2,826	....	51	1,831	....	....	10	52
Metallic mines	15	562	....	20	716	7	437	....	8	870	14	991	....	19	1,160	36	1,990	....	47	2,248	....	....	....	....
Quarries and stone-cutting	8	152	....	8	244	....	....	....	....	....	5	84	....	5	154	13	236	....	13	398	....	....	1	25
Manufactories.																								
[Establishments authorized by the royal decree of January 29, 1863.]																								
Establishments managed under the law of April 21, 1810	455	14,441	....	355	18,143	15	270	1	15	467	49	893	....	54	1,642	519	15,604	1	424	20,252	1	30	27	1,204
Work in metals	123	1,413	....	116	2,808	8	68	....	7	104	17	276	....	16	427	148	1,757	....	139	3,334	....	....	1	1
Fabrication of machinery and tools	173	1,871	....	139	3,373	46	539	....	43	704	5	29	....	5	66	224	2,439	....	187	4,143	....	....	12	101
Fabrication of arms and foundries of cannon	59	719	1	59	1,409	....	....	....	....	....	....	....	....	....	....	59	719	1	59	1,409	....	....	4	15
Glass manufactories	15	259	....	22	690	....	....	....	....	....	....	....	....	....	....	15	259	....	22	690	....	....	1	20
Manufactories of chemical products	....	....	....	1	42	1	2	....	1	3	....	....	....	....	....	1	2	....	2	45	....	....	....	....
Preparation and work of wood	31	232	....	33	470	17	137	....	17	212	6	55	....	7	115	54	422	....	57	797	....	....	1	8

Steam machinery in the province of Liege, December 31, 1886—Continued.

For what purpose used.	Judicial arrondissements.												The province of Liege.				Low-pressure apparatus.		Apparatus of foreign makers.	
	Liege.				Verviers.				Hery.											
	Motors.		Simple generators.	Active steam boilers.	Motors.		Simple generators.	Active steam boilers.	Motors.		Simple generators.	Active steam boilers.	Motors.		Simple generators.	Active steam boilers.				
	No.	Horse-power.	No.	No. Surface of heat.	No.	Horse-power.	No.	No. Surface of heat.	No.	Horse-power.	No.	No. Surface of heat.	No.	Horse-power.	No.	No. Surface of heat.	No.	Horse-power.	No.	Horse-power.
Manufactories—Continued.																				
Manufactories of cloth and other woolen stuffs	10	311	1	13 582	247	9,668	11	279 18,052	.....	.....	.....	....	257	9,979	12	292 18,634	.....	.....	1	4
Spinning, weaving, and stamping of cotton and flax	7	312	.....	8 424	1	6	.....	1 9	.....	.....	.....	....	8	318	.....	9 433	.....	.....	.....	.....
Bleaching and dyeing works	3	71	1	3 119	58	1,678	6	68 5,084	.....	.....	.....	....	61	1,749	7	71 5,158	.....	.....	2	45
Thrashing of grain	37	204	.....	37 246	.....	.....	.....	....	34	181	.....	34 228	71	385	.....	71 468	.....	.....	10	68
Grinding of grain	48	972	.....	54 1,606	12	227	.....	13 449	14	209	.....	17 473	74	1,406	.....	84 2,528	.....	.....	1	8
Breweries and distilleries	45	266	1	50 731	8	51	2	8 98	25	185	.....	24 678	78	502	3	82 1,507	.....	.....	2	10
Manufactories of sugar	57	722	.....	37 2,567	.....	.....	.....	....	100	1,267	1	76 6,508	157	1,989	1	113 9,070	.....	.....	3	22
Paper factories	8	238	.....	6 391	2	70	.....	3 230	51	1,079	7	42 2,975	61	1,387	7	52 3,596	.....	.....	1	51
Typographic printing	10	35	.....	12 107	.....	.....	.....	....	3	6	.....	3 15	13	41	.....	15 122	.....	.....	.....	.....
Divers manufactories	252	2,765	23	213 5,368	49	497	6	46 1,079	37	362	.....	34 800	338	3,614	29	293 7,247	.....	.....	21	247
Railroads.																				
Service of individuals:																				
Fixed machines	14	87	.....	14 129	.....	.....	.....	....	2	10	.....	2 16	16	97	.....	16 145	.....	.....	7	21
Locomotives	137	11,815	.....	137 5,277	1	15	.....	1 15	128	15,011	.....	128 9,973	266	26,841	.....	266 15,265	.....	.....	56	10,645
Total	1,961	65,367	27	1,869 72,797	457	14,150	26	532 28,069	508	20,963	8	483 25,686	2,976	100,350	61	2,884 126,502	1	80	164	12,685

NORWEGIAN FISHERIES IN 1887.

REPORT OF CONSUL GADE.

Herewith is transmitted a report on last winter's cod fisheries of the different districts along the Norwegian coast.

The principal catch, that at Lofoten, commenced as usual in the middle of January, and the fish, being in good quantities on the grounds, an easy and abundant catch was generally anticipated; but unfortunately it was soon hindered by heavy gales, which continued nearly incessantly up to the middle of March, at which time only a very small quantity was brought ashore.

The prospects were then very gloomy, but thereafter the weather bettered a little and improved gradually up to the close of the season (10th April), when a quantity of 31,000,000 cod was reported to be the total return. Of this quantity 24,250,000 are cured (salted) for klipfish, and the other 6,750,000 dried for stockfish.

The other products of this catch are estimated at 9,500 barrels of steam-refined medicine oil, 16,600 barrels of other oils of inferior qualities, the product of 41,450 barrels of liver and 31,450 barrels of fish-roe, all at a total value of $1,350,000, this being nearly 15 per cent. below the average proceeds for the past ten years.

In consequence of the year by year increasingly sharp competition of the klipfish, principally by the French producers, and also of heavy losses sustained by our exporters of this main article, the prices in Lofoten from the commencement of the fishing season were lower than for several years past, and may be quoted at $2.80 for 100 cod (without heads and entrails), at a cost of $2.70 for a barrel of livers, and at $4.25 for a barrel of fish-roe. The fatness or quality of the fish is reported to be nearly equal to that of the two previous years, whereas the quantity of roe turned out to be proportionately smaller, owing to the fact that the greatest part of the fish were caught uncommonly late in the spawning season.

At the period when the whole fishing fleet this season was collected at Lofoten, there were 6,883 boats, with 28,700 men, employed, or pretty nearly the same as the two previous years, but the gross profit for each net fisher is for this season estimated only at $42, against $60.30 in 1886, and $47.50 in 1885.

Also on the banks in the southern districts of Romsdalen and Nindmire the cod came at the regular period, but on account of the continually stormy weather the catch in these parts turned out very poorly, showing proceeds of only 2,750,000, against 13,333,000 in 1886.

On the other hand, a rather unexpected and rich catch simultaneously took place in the immediate vicinity of this city, being estimated at nearly 3,000,000, which, however, were sold at very low prices.

According to the above-stated figures, the returns of all the Norwegian cod fisheries during the just finished season give a total quantity of 36,750,000. For 1886 it proved to be 52,000,000.

The so-called capelan fishery in Finmarken, which regularly follows the cod fishery in Lofoten, is not yet finished, but the season being already now far advanced, the last days' reports may be quoted as giving the final result, and according to these the quantity pro-

duced was 9,000,000 cod, of which more than 5,000,000 were dried for stockfish, besides 3,130 barrels of medicine oil and 4,780 barrels of liver for the other qualities. In 1886 the total return was put down at 6,000,000 fish.

During February and March a quantity of at least 180,000 barrels of the genuine winter herring, which, years past regularly came to these parts, were captured on the old grounds near Stavanger, but owing to the now decreased demand for this meager and inferior kind of herring the prices from the beginning went very low, and only 65,000 barrels were cured, whereof 40,000 barrels were exported to England partly smoked, but chiefly fresh laid in boracic acid, which method for preservation has proved to be serviceable for shorter periods, say three to four weeks in the winter. The remaining quantity was sold either for home consumption, or even for manure, at the nearest districts, the prices going down even below 1 krone (26½ cents) per barrel.

The sea was full of herring and nearly any quantity could be taken; but the article having no value at all, the fishing for this reason stopped by itself.

F. G. GADE,
Consul.

UNITED STATES CONSULATE,
Bergen, May 12, 1887.

MANUFACTURES AND AGRICULTURAL INTERESTS IN ROUEN.

REPORT OF CONSUL WILLIAMS.

COTTON.

Mr. Roudot, chairman of the permanent committee to investigate the state of the cotton industry of France, has recently published an interesting report, from which I venture to make a few extracts, in the hope that they may be of interest at home.

He writes that spinning has suffered from foreign competition and a falling market. The unexpected increase of the cotton production in the United States since the abolition of slavery is considered one of the most curious phenomena of the age.

Before this period a crop of 3,000,000 bales was the most which could be counted on. Then the surprise at discovering a crop of 6,500,000 in 1885 to 1886, increased from 5,642,000 in the previous year, and indicating, one year with another, an average increase of 16 per cent., can be readily imagined. In view of this increased production the cotton-spinners of America and England have conformed themselves to this new state of affairs by adding to and replacing their old machinery with new of the most approved pattern.

In 1874 England had 37,500,000 spindles; in 1886 43,000,000 spindles; while in the United States the number of spindles has been doubled during the last fifteen years.

The summing up is that the supply of cotton has steadily increased, and intelligent manufacturers have availed themselves of every improvement and extended their works, and thereby greatly decreased the cost of manufacture; in brief kept pace with the times.

France meanwhile has done less than other countries in this line. The quantity manufactured remains stationary, at about 110,000,000

kilograms per year, and the importation of cotton yarn has not varied, and amounts to about 13,000,000 kilograms.

The old-fashioned spinning-mills (of which France can now furnish the best collection) still abound. They must prove profitless in spite of the utmost efforts to sustain them by a high protective tariff.

The newly erected mills have given a certain vitality to the trade, but are insufficient to control it. The reason of this is simple enough. These new mills require a great outlay of capital, and naturally a great distrust will arise regarding their ultimate success, whether after all these can successfully compete for any great length of time with the foreign progress.

The spindles of France cannot yet supply their looms; consequently foreign yarns must supply the deficiency. Cotton, unlike silk and wool, has had a constantly downward tendency throughout the year 1886, and this depression cannot be estimated at less than 10 per cent. compared with the year 1885.

The French market seems, however, to have obtained some new customers, and succeeded in clearing out its accumulated stock during the latter part of the year 1886.

This fact, in connection with the caution displayed by manufacturers, has tended to sustain prices during the present year, although they remain far from satisfactory.

Official report of the Chamber of Commerce of Elbeuf for the month of July on wool and woolen goods.]

WOOL.

France.—The French wool holds the price fixed in June. All, except some of the wool of Normandy and Brittany, has been sold.

Australia.—The London sales of June 7 closed July 14. Of 359,000 bales offered, 327,000 were taken, divided as follows:

	Bales.
England	160,000
The Continent	150,000
America	60,000

Prices were the same as in June. The market closed firm.

La Plata.—617 bales were sold at Havre, of which 450 were offered at public sale on July 20 and 21. Although the stock offered of Buenos Ayres was very fine, but few buyers were attracted. The fine wools brought the prices paid in May. Inferior quality of Montevideo were in very slight request. The stock is 6,140 bales.

At Anvers 1,742 bales were sold. The market had lost the firmness of the early days of June, and receded to the price paid in April. The next sales are fixed for August 17, and include 24,500 bales Plata and 11,000 Australian.

The stock consists of 40,250 bales.

Russia.—Market quiet. Stock 2,925 bales. The new clip is awaited. Combed and spun wool, market weak.

The manufacture of fancy cloth of combed wool is still brisk. Weaving by machinery and by hand has been active; spinners and dyers have had less to do. Black cloths have been in more demand. Government and military goods remain without any change.

Elbeuf has sent out during the month of July 484,148 kilograms, after deducting that which has been brought in; about 11,243 kilograms more than in the corresponding month of last year.

Wages are without change.

Fancy goods seem to meet with favor, and many manufacturers have received considerable orders for these goods.*

* Consul Williams writes August 4, 1887:

At Elbeuf, if the situation of the woolen trade has not sensibly improved during the last fifteen days of July, manufacturers cannot complain of any diminution of orders, and many are so sanguine in regard to the future that they are preparing to

AGRICULTURE.

This section of France, extending over the entire consulate, from Rouen to Dunkirk, has been without rain for more than two months. In 1818 the rain did not fall for 94 days. In 1422 the drought continued into October. Already the usual sources of supply indicate that they cannot much longer be relied upon. The country assumes a very desolate appearance. It is true that the harvest of grain has been gathered under favorable circumstances, but this, too, was diminished by the cold spring weather. But the fields are literally scorched. The sowing of turnips, which usually follows the harvesting of rye, is indefinitely postponed.

The herbage of the fields and the trees of the forest have taken fire in many places, and everywhere are constantly watched. These losses as yet are not very material, but it is feared that the meadows will be seriously and permanently affected if this drought continues much longer. Cattle have been brought to market in large quantities, and these forced sales have resulted disastrously to the farmers, while the butchers have managed their part so well that no benefit has arisen to consumers.

All vegetables, although of poor quality, are sold at high prices.

It certainly would appear that no more opportune time could arise for the favorable introduction of canned or otherwise preserved vegetables and fruit from America.

CHARLES P. WILLIAMS,
Consul.

UNITED STATES CONSULATE,
Rouen, France, August 11, 1887.

COMMERCE OF THE UNITED STATES WITH MARSEILLES.

REPORT OF CONSUL MASON.

The record of exports of merchandise from the port of Marseilles to the United States during the first six months of 1887 shows an important increase over the figures for the corresponding period of last

manufacture on a more extended scale during the next season. Elbeuf and Lonvius obtained a full share of the Government contracts allotted July 30, but at what are considered low figures.

At Roubaix "Belgian goods" for the English market are dull, while fancy cloths are in demand. There is but slight demand for thin, light-colored woolen fabrics. At present there is just enough to keep all the factories at work, but greater activity in the future is confidently expected.

At Fourmies the new styles are not offered or sought for, and but few transactions are noted during the last fifteen days of July, as the views of buyers and sellers do not agree.

In the department of Marne most of the manufacturers are satisfied; the exception lies with spinners of combed wool and the specialties of a few weavers.

At Leeds more provincial orders have been taken than for several years past. There is a scarcity of tweeds and light flannels, and those who hold them can command their own prices. Some factories are running on extra time to fill their orders for the United States, Canada, Italy, Australia, and the Cape.

At Huddersfield many orders flow in for the double-milled curly cloths, also for other firm, heavy goods. Some of the manufacturers complain of the slackness of home orders.

At Rochdale the manufacturers are still busy on summer goods; the delivery of heavy goods is thus delayed, and transactions in them are below the average of former years.

year, and bears testimony not only to the general prosperity of American business, but the gradual recovery of Marseilles commerce from the lethargy and depression entailed by the visitations of cholera in 1884 and 1885. The comparison is as follows:

Total value of exports to the United States.

First six months of—	
1886	$812,377 10
1887	1,031,854 09
Increase	219,476 99

This notable increase has been due largely to the growing importation by American manufacturers of two raw materials, viz, crude glycerine and wools, the latter being largely of the third class, carpet grade.

In these two items the record presents the following comparison for the first six months:

Glycerine:	
1886	$793 10
1887	85,167 53
Increase	84,374 43
Wool:	
1886	238,825 94
1887	331,892 64
Increase	93,066 70

In respect to imports from the United States the most notable change has been in the receipts of wheat, which, by reason of the short French crop of last year, has been largely imported from all wheat-exporting countries, including the United States.

The following table shows (in quintals of 220 pounds) the wheat imports at Marseilles from each country during each of the first six months of 1886 and 1887, respectively:

Month.	United States.	Russia.	British India.	Algeria.	Turkey.	Roumania.	Other countries.	Total.
1886.								
January	2,768	185,572	19,668	98,278	31,292	30,715	392	368,615
February	6,029	300,331	79,121	104,287	27,769	13,258	506	531,295
March	14,376	99,633	104,772	65,004	21,876	8,424	1,513	315,698
April	11,916	30,494	44,495	56,295	2,086	1,880	1,947	148,203
May	26,460	20,258	43,360	59,295	2,761	938	496	153,569
June	60,152	130,868	174,806	68,460	24,336	3,274	970	471,866
Quintals	121,716	776,151	466,176	446,499	110,040	57,814	5,056	1,983,452
Bushels	445,480	2,840,718	1,706,304	1,634,186	402,746	211,600	18,505	7,259,434
1887.								
January	22,618	200,071	43,551	138,346	26,814	5,668	.....	437,068
February	39,068	138,490	72,504	110,790	44,266	1,946	1,738	408,802
March	39,856	137,065	84,871	70,899	38,174	1,554	1,940	419,379
April	34,784	136,578	24,914	62,113	50,579	8,805	3,094	360,867
May	47,588	33,076	27,011	66,443	25,142	3,971	5,059	208,289
June	87,831	146,191	171,398	47,334	21,874	27,888	15,247	517,763
Quintals	271,760	786,491	494,244	495,985	251,849	49,832	27,056	2,307,157
Bushels	994,642	2,878,557	1,552,788	1,815,086	921,767	182,385	99,035	8,444,195

So that while the increased imports from all quarters amount to 323,705 quintals, the increase from the United States is 150,044 quintals, or nearly half the entire amount.

THE CROP OF 1887 AND PROSPECTS FOR IMPORTS.

The outlook for the wheat trade during the coming season is equally encouraging. Throughout Southeastern France the crop, although of good quality, is rather inferior in quantity to that of last year. Throughout the remainder of the country, say north of the latitude of Avignon, the yield is variable, abundant on heavy soils, but scanty on loose and open ones. On the whole, it is anticipated that the home crop will be below rather than above that of last year, when it reached about 100,000,000 hectoliters, leaving 20,000,000 hectoliters, or 58,560,000 bushels, to be supplied by importation. But during the whole of last season, British India, as the foregoing exhibit shows, was a heavy contributor to the wheat supply of Marseilles. This season there is a deficit of 28,600,000 bushels in the Indian wheat crop, and the exporting capacity of that formidable rival will be proportionately reduced. Russia has a fine crop and is already shipping heavily to Marseilles, but from all that can be seen, the United States will furnish a large part of the supply which would otherwise have come from India. The local stocks on hand throughout Southern France are much lighter than those of one year ago, so that when the present agitation in the American wheat market subsides and prices become fixed and steady it may be confidently expected that the exports in this direction will become more heavy and constant than those of any season in recent years.

FRANK H. MASON,
Consul.

UNITED STATES CONSULATE,
Marseilles, July 20, 1887.

RAILWAYS AND NEW RAILWAY REGULATIONS IN JAPAN.

REPORT OF CONSUL JERNIGAN.

The Government of Japan has recently issued a series of regulations on the subject of private railway enterprises. Before considering the more important provisions of these regulations, a brief synopsis of the history of railroads in Japan may be interesting, and for statistical information on the subject I am indebted to the London and China Express.

HISTORY.

Commodore Perry was the first to give the Japanese a practical illustration of the idea of a railroad, but it was not until 1870 that the first railroad was introduced into Japan with a view to profit and for commercial purposes.

It was during the year 1870 that the first rail was laid of the road now connecting Tokio and Yokohama. This road was opened in

1872. It is 18 miles long and cost 2,855,732 yen. The net traffic receipts, as far as ascertained, have been:

Year.	Traffic receipts.	Profit.
	Yen.	Yen.
1883	374,394	13—1
1884	356,122	12—4
1885 (nine months)	231,558	8—1

The second line was constructed in 1876, and runs between Hiogo and Kioto, via Osaka. It was the purpose of the Government, and is now, to connect by rail the new and old capitals, Tokio and Kioto, but this larger project yielded to the pressing demands of trade, which, originating at the great commercial center, Osaka, pointed out the necessity of a line from that city to the open port of Hiogo.

The civil war of 1876 (called the Satsuma rebellion) interrupted all railroad enterprises and it was not until 1880 that the line under consideration was completed from Kioto to Otsu, on the southeastern corner of Lake Biwa.

This line from Hiogo to Otsu is 58 miles long and cost 7 763,500 yen. The net receipts as far as ascertained have been:

Year.	Traffic receipts.	Profit.
	Yen.	Yen.
1883	520,105	6—6
1884	388,322	5
1885 (six months)	212,045	2—7

Since 1880 there has been considerable activity in building and projecting railroads in Japan. In addition to the roads named, there are opened for trade the following: Tsuruga–Ogaki, 49 miles long, and costing 2,981,102 yen. Tokio–Mayebashi, 68 miles long, and costing 2,323,302 yen. Shinagawa–Akabane, 13 miles long. (Have not been able to learn the cost.) Omiya–Utsunomiya, 5 miles long and costing 502,216 yen, exclusive of bridges. Takasaki–Yokogawa, 18 miles long and costing 350,325 yen. Handa–Nagoya (including extension to Kiyosu), 30 miles long and costing (at present) 897,912 yen. Naoetsu–Sekiyama, 18 miles long and costing (at present) 237,497 yen.

The following lines are under construction or in contemplation: Between Ogaki and Kiyosu, about 10 miles; between Yokogawa and Sekiyama, about 80 miles; between Yokohama and Nagoya, about 120 miles; between Nagahama and Ishibashi, about 40 miles; between Utsunomiya and Sendai, about 150 miles; and between Sendai to the port of Shiogawa, 10 miles.

The tracts for all of these roads have been surveyed and the roads built by foreign mechanics and engineers, but on examining the list I find that American mechanics and engineers have been virtually ignored.

Even now, when public opinion in Japan is almost wholly occupied by the subject of railroads, and no less than thirty-four new railway projects have been started within the last six months, twenty-one of which involve an aggregate capital of $48,765,000, I am unable to perceive any change in this direction favorable to the United States.

REGULATIONS.

The imperial ordinance entitled "Private Railway Regulations" contains forty-one articles, and might be termed by lawyers a misnomer. An examination of some of its articles will show that such a name would not be misapplied, for while the title of the ordinance implies that railroad enterprises might be undertaken by private individuals, it is clear that no such enterprises could flourish a day that did not have the full sanction of the Government.

The application for the construction of a road has to be made by no less than five persons, who shall jointly through the municipal government in the jurisdiction of which it is intended that the head office of such railway shall be situated, transmit to the central government, in the form of a petition for leave to establish the proposed railway company, such information as is necessary to explain the undertaking.

After the petition has been submitted, should it appear that the proposed undertaking will interfere with any existing railway, or that the local condition, &c., do not show any necessity for the construction of the new line, then the petition will not be granted; otherwise a charter authorizing the work of constructing the line and incorporating the company will be issued, after having received the approval of his Imperial Majesty.

If the charter should not be obtained, it will not be competent for the promoters to raise any of the capital by means of shares, or, in the name of the company, to commence the work of constructing the railway.

The work of railway must be begun within three months from the date of the charter, and finished within the time fixed by said charter. If an extension of time be desired, it must be made through the municipal government within two months, but such extension cannot amount to more than half the period originally fixed. The width of gauge, unless specially sanctioned to the contrary, shall be 3 feet 6 inches.

No company can alter its rules or methods of working without the sanction of the Government, and rules and rates of freight or charges for passengers must be fixed under, and all alteration or changes submitted to, the approval of the chief of the railway bureau, and so must all changes in the hours of starting and arriving, and the number of trains run, &c.

When a charter for a railroad is granted only for a special period, the Government shall have the right at the expiration of such period to buy up the line and its accessories, and the price at which such purchase shall be made shall be a price to be calculated from the average price of the shares during five years previous to the date of purchase.

Before any charter can be granted detailed plans and estimates must be submitted to the railway bureau and approved by the experts of that office. Other exceptional powers of inspection are reserved to the railway bureau, such as discretionary inspection during construction, compulsory inspection and approval on completion of the work and before traffic is commenced, and discretionary inspection while the railway is in use. The tendency of such a system of espionage is to discourage the formation of private companies, which is greatly increased when it is proposed to subject honest en-

terprise to the inconvenience of completing the work of construction within three months from the date of the charter, with a possible extension of not more than a month and a half. The above compilations show that the purpose of the Government is to retain in theory, as well as practice, control of all the railroads in Japan.

AMERICAN STOCK.

Another subject of importance to American workshops is now claiming the attention of the press in Japan.

The *Jiji Shimpo*, an able and independent native journal, recently referred to the superior construction of American rolling stock and American workshops. Enlarging upon the subject in its relation to English workshops, the *Japan Mail*, an English journal, has the following to say:

American rolling stock has been employed in Australia, and as the results of the trial have practical interest for Japan we shall give them here:

In the "Minutes of Proceedings of the Institution of Civil Engineers" for July, 1886, we find an essay, read by Mr. R. Gordon, "On the economical construction and operation of railways in countries where small returns are expected, as exemplified by American practice." A discussion was taken upon this essay, and in the course of the discussion Mr. R. H. Burnett spoke as follows;

From his experience of the working of American and of English locomotives on the New South Wales Government railways, of which he had charge for several years as head of the locomotive department, American locomotives were much inferior, both in endurance and in economy in working, to English-made ones, notwithstanding that the American engines under his charge were constructed by one of the best-known makers in the United States, and might therefore be taken as representing the best American practice. Having had considerable practical experience, both in the making and the working of locomotives, he had no hesitation in saying that wherein American practice differed from English practice it was to the disadvantage of the efficiency and durability of the American engine.

T. R. JERNIGAN,
Consul.

UNITED STATES CONSULATE,
Osaka and Hiogo, Japan, June 14, 1887.

DEVELOPING AMERICAN TRADE WITH CHINA.

REPORT OF MINISTER DENBY.

It has long since been demonstrated that one of the chief impediments in the way of opening new branches of trade in the East was the ignorance in which our producers and manufacturers were of the needs and tastes of these remote countries, where foreign trade is centered in a few localities and in the hands of a very limited number of merchants whose operations are very frequently confined to a certain category of goods. Of course there are exceptions, and some foreign firms do a general import and export business, but I do not believe that their number is sufficiently great or their operations so extensive as to invalidate my remarks.

It cannot, furthermore, be expected that in a country like China commercial travelers will ever be able to do much in the way of finding new markets for their goods which are frequently not adapted to the requirements of the people or are made in patterns which do not suit their taste.

We already manufacture a number of articles especially for the China market, but the list of such goods might certainly be increased if our manufacturers were better acquainted with the wants of the market and could manufacture articles or patterns already adopted by the Chinese, and if they were in possession of such information as would enable them to regulate their prices so as to be able to compete with the native producers. I will only mention the article of hardware. Chinese hardware, though cheap, is of a very inferior quality, and it seems impossible that our manufacturers, if they knew the tastes of the Chinese, could not produce articles far superior in quality and at such low prices that they could easily compete with the native goods in the Chinese markets.

It is also an undoubted fact that among the natural products of such a vast country as China there must be many which would be useful and salable in America were their uses better known.

The importance of bringing the products and manufactures of remote countries under the eyes of home manufacturers and merchants has, for many years, been appreciated by some of the European powers which have commercial interests in the East, and they have made efforts to remedy this want.

At least twenty-five or thirty years ago the French Government found that the establishment at Paris of a permanent exposition of the products and manufactures of its remote colonies was highly advantageous to the development of trade.

More recently many of the consular officers of Germany have been collecting specimens of produce and manufactures of their districts, and also of the foreign manufactures for sale in the native markets, and forwarding them to different localities in the German Empire, there to be exposed to the public. Accompanying these samples the consuls have sent such detailed descriptions as might enable interested parties to ascertain if they could possibly compete advantageously with the native manufacturers on their own markets. Different chambers of commerce have defrayed the expenses of purchasing and forwarding these goods—expenses which I learn have never been considerable—and have provided room for their exhibition. The German Government has not been called upon to make any allowances or incur any expenses in accomplishing this result.

A short time ago Belgium adopted an analogous plan and has opened in one of its chief manufacturing centers an exposition of the produce and manufactures of the far East.

Last year the French syndicate, which has its headquarters at Tien-Tsin, opened at that place an exposition of French manufactures for the information of the Chinese, and I hear their plan has already borne fruit.

Some plan analogous to that followed by Germany might prove beneficial to the development of our trade with China. Our consular officers in China would, for their part, be well pleased to do their share of the work, and give this further proof of their earnest desire to develop trade between China and the United States.

CHARLES DENBY.

UNITED STATES LEGATION,
Peking, June 22, 1887.

THE CHINESE GUILDS.

REPORT OF MINISTER DENBY.

I transmit herewith an article on Chinese guilds, a subject of great importance for the comprehension of commercial matters in China.

Prior to the treaty of Nanking of 1842, all communication with foreigners was had through the Co-hong Guild of Canton. Large sums were paid to the Imperial Government for the privilege of the foreign trade. Foreigners could not either officially or commercially communicate with the Chinese authorities except through some member of the Co-hong. The factories at Canton were owned by the Co-hong merchants. They were princely in their dealings. Instances are recorded in which one of them, Howqua, gave $1,000,000 to save Canton from bombardment, and again to pay the debts of a member of the Co-hong.

The treaty of Nanking opened up China to general foreign trade and the Co-hong was abolished. The spirit of monopoly was not, however, repressed. In 1858 the 14th article of the French treaty absolutely prohibited the formation of any privileged commercial society and all monopoly of trade. On the representation of a consul all such associations were to be dissolved; but the treaty has remained a dead letter.

In every city in China there are guilds, controlling arbitrarily every branch of business. Boycotting exists in the most oppressive manner. In the great cities there are numerous trades-unions, who regulate hours of labor, apprentices, strikes, and prices on the most approved American plan. Mercantile guilds have existed time out of mind.

In most cities (?) each province has its own guild. The guild protects its members against sectional prejudices, prevents litigation, and performs the usual functions of a chamber of commerce. Ningpo is a noted place for guilds. I have visited some of the guild halls, which are gorgeous and imposing. They are designed for an exchange, theatrical representations, shrines, and restaurants. The bankers, the silk and tea men, the dealers in lumber, in opium, and the druggists, all have guilds.

It is conceded that these guilds, though despotic, are not altogether harmful. They are held amenable to law, and are ordinarily reasonable in their dealings with foreigners. They administer justice and compel their members to act honestly. Trades-unions are very numerous. The Ningpo Fishmongers' Union has a reserve fund of $700,000, which is loaned at a low rate of interest. There are unions for blacksmiths, carpenters, wire drawers, silk weavers, millers, postal companies, and barbers.

The wages would be considered ridiculously low in America. For instance, a Wênchow tailor gets $5 per month and his food, which probably costs $1.50 more. For these wages he toils unceasingly, except on the last five days of the year and the first ten days of the new year, with four other holidays. Strikes are infrequent.

The trades-unions are noted for their truculency. At Soochow, not long ago, one of the gold-leaf craft violated the rule which for-

bids an employer from taking more than one apprentice at a time. He was bitten to death by 123 men, each one of whom bit him.

Labor-saving machines encounter violent opposition. Sheet brass, for manufacturing brass utensils, was taken to Canton, and to prevent a riot it had to be removed to Hong-Kong. Some sewing-machines for sewing felt shoes, imported from America, met the same fate.

Co-operative loan clubs are very common.

It has been stated by some writers that the Chinese lack the power of combining. Certainly this is not true as far as combination for commercial or mechanical purposes are concerned. Wherever they have made settlements in the East, they have speedily controlled and directed commercial operations. These guilds have been introduced into California and are very powerful.

Among agricultural laborers there seems to be no combination. Holdings are small and living is cheap. The laborer may save enough to become the proprietor of a small tract; he is conservative and contented; he is not weighed down by caste or feudal laws. If he is endowed with good mental qualities he may rise in the social scale; the examination hall is open to all, and success there insures advancement in the state.

CHARLES DENBY.

UNITED STATES LEGATION,
Peking, May 23, 1887.

[Inclosure in Mr. Denby's dispatch.]

[From the "Journal of the China Branch of the Royal Asiatic Society," March, 1887.]

CHINESE GUILDS OR CHAMBERS OF COMMERCE AND TRADES-UNIONS.

BY D. J. MACGOWAN, M. D.

The following cursory observations on Chinese guilds have been drawn up at the suggestion of Dr. Lührsen, formerly German consul-general, Shanghai, communicated to me by Count d'Arnoux, deputy commissioner of imperial maritime customs, Wênchow.

It is a subject of no inconsiderable importance, and has already received attention from commissioners of customs, consuls, sinologists, and publicists.* What follows is submitted merely as an additional contribution, in the hope that it may serve to elicit further inquiry; for until the administration of those institutions at each of the nineteen ports open to foreign trade is carefully made, this important feature in Chinese secular life can only be superficially studied.

Foreigners in China apply the term "guild" to two classes of institutions denominated *Wei-kuan* (club-houses) and *Kung-so* (public halls). *Wei-kuan* may be not inaptly compared to chambers of commerce, while *Kung-so* fairly represent trades unions.

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*"Reports on Trade:" Imperial Maritime Customs, 1866, p. 14; 1873, pp. 72, 110, 112, 119; 1881, pp. 5, 11. "Regulations of the Canton Guild at Foochow," translated by C. F. R. Allen, esq., H. B. M's Consular Service. "Vocabulary and Handbook of the Chinese Language," Foochow, 1872, Vol. II, p. 399. "Chinese Guilds and their Rules," by "K.," *China Review*, July–August, 1883. British Blue Book: "Commercial Report by H. B. M's Consuls in China, 1884," Part II; Consul Cooper's Report on the trade of Ningpo. "Chinese Sketches," by H. A. Giles, H. B. M's Consular Service, 1876; "Guilds," p. 49. Shanghai General Chamber of Commerce: "Minutes of Annual Meetings and Reports, 1882-1883;" "Tea Weighing at Hankow—Taboo at Hankow." "Note sur les petites Sociétés d'argent en Chine," par G. Eug. Simon, Consul de France à Ningpo: *Journal of the China Branch of the Royal Asiatic Society*, December, 1868. *China Mail*, 6th April, 1886.

The subject, therefore, is naturally divisible into two parts and under the following headings:

PART I.—MERCANTILE GUILDS.

Their origin.
Compatriot guilds—
of Ningpo.
of Pakhoi.
Guilds *vs.* local authorities.
General administration of guilds.
Guild halls.
Revenue.
Government; "boycotting."
Rules on credit and storage of goods.
Rules of weights and measures; closing and opening of the year.
Rules of tare; insurance; police.
Rules against fictitious buying and selling; charities.
Wênchow Druggists' Guild.
Fukien guilds at Ningpo: the Foochow, Amoy, and Hsing-hua.
Shantung guild of Ningpo.
Shanghai Tea Guild; Silk Guild.
Regulations, "boycotting," &c.
Ningpo Bankers' Guild.
Fictitious dealing in dollars.
Shanghai bankers' guilds.
Guilds and foreign merchants.
Collisions at Swatow, Hankow, and Ningpo.

PART II.—TRADES-UNIONS.

Ningpo Fishmongers' Union.
Wênchow Blacksmiths' Union.
Wênchow Carpenters' Union.
Wênchow Copper Wire-Drawers' Union.
Wênchow Silk Weavers' Union.
Wênchow millers.
Wênchow postal companies.
Wênchow Barbers' Union.
General remarks; hours of labor; apprentices; strikes; "boycottings"; penalties.
Co-operative clubs.
Reflections.
General conclusion.

PART III.—SUPPLEMENTARY NOTES.

Agricultural laborers.
Agrarianism.
Contentment of the proletariat of China.

PART I.—MERCANTILE GUILDS.

The origin of mercantile guilds is succinctly given in the constitution and by-laws of the Ningpo guild at Wênchow, which, in a preamble such as those institutions usually publish for their *raison d'être*, says: "*Wei-kuan* were first established at the metropolis by mandarins among compatriots or fellow provincials for mutual aid and protection. Subsequently, merchants formed guilds like those of the mandarinate, and now they exist in every province."

How long metropolitan compatriot guilds have been in existence I have been unable to discover. Early in the Ming era a Kiangsu guild (*Yen-ling, Wei-kuan*) flourished at Peking, and it is probable that they were known as early as the Tang period. Being of the nature of clubs, their origin may have been much more ancient.

At Peking the guilds include compatriot members and merchants, the official class, of course, preponderating in numbers and influence. In the provinces the mercantile is the controlling element; mandarins not needing such protection.

Provincial compatriot guilds have two main objects in view—protection against sectional prejudices to which settlers from distant places are subjected, and for the prevention of litigation among its members; and, latterly, including the functions of chambers of commerce.

NINGPO COMPATRIOT GUILD OF WÊNCHOW.

In relation to the first-named object, the Ningpo-Wênchow guild (established at the close of the last century) says in its preamble: "For a century no province has been without Ningpoese residents. Ningpo is a maritime region. Those of its people who cannot find employment as agriculturists resort to other places for trade. Here at Wênchow we find ourselves isolated; mountains and sea separate us from Ningpo, and when in trade we excite envy on the part of Wênchowese, and suffer insult and injury, we have no adequate redress. Meanwhile firms, each caring only for itself, experience disgrace and loss—the natural outcome of isolated and individual resistance. It is this which imposes on us the duty of establishing a guild."

CANTON COMPATRIOT GUILD OF PAKHOI.

This guild in its preamble says: "The people of Pakhoi are very covetous, and of a licentious nature, showing little respect for the laws; while cases of robbery and theft are innumerable, to the great annoyance of our merchants; and when trouble arises between our trades and local merchants there is no way of dealing with the latter.

"It is hoped that the rules we have adopted will lead to uniformity of action and unanimity of feeling among our members, who are bound by ties of townsmanship, and in this way secure ourselves against gradual degeneration, while it will teach those outside the guild that, being of one mind in our determination to oppose wrong, unscrupulous merchants and bad characters will seek to avoid us, and so avert their own discomfiture."

It is strange that institutions of such obvious utility should be of recent formation. According to the above they were scarcely known two centuries ago.

With regard to self-protection, which was the principal cause of their establishment, that function is effectually secured by the semi-official character that is accorded to them by local authorities. They undertake "to prosecute in behalf of their members when satisfactory proof is afforded of the equity of their claims. Members having occasion to go to law to obtain redress for a real grievance, and finding their resources inadequate to carry on the suit, the guild will address a joint petition to the court praying for an adjustment of the case. Half the expenses of legal proceedings will be defrayed from the funds of the association; but if it is discovered that the plaintiff has an unworthy case and no resources, or that his trouble originates from gambling or dissolute life, all claims to assistance will be dismissed. Members going to law to effect a settlement of claims will have three-tenths of the cost defrayed by the guild, the balance being borne by the litigants. But before legal proceedings are commenced, the unanimous consent of a meeting of members for approval of action shall be obtained. The three-tenths contributed from the fund shall be inclusive of the amount involved, and will only be issued when the claim is insufficient to cover the cost of legal proceedings. When the claim sued is sufficient to liquidate costs, no grant will be made—not with a view to the saving of expenditure, but with the object of preventing advantage being taken of this rule for the sake of gain and to repress the spirit of persistency in litigation among members."

GUILDS VERSUS LOCAL AUTHORITIES.

When piracy prevailed on the coast complaints of victims were immediately written out by guild secretaries in due form, which secured such redress as was possible.

Protection is sometimes needed against local authorities. Take the following illustration from the records of the guild of the Ningpoese at Wênchow:

In the latter part of the first decennium of the present century a dearth of rice was experienced in several neighboring provinces at a time when that staff of life was abundant in Southern Chêkiang, and Ningpo traders in Wênchow availed themselves of an imperial edict which allowed the exportation of rice from any part of the Empire; they chartered vessels to engage in the trade, but the local authorities seized the junks and placed the merchants under arrest, refusing to admit the applicability of the imperial rescript to Wênchow. The guild appealed to the provincial authorities at Hangchow without obtaining redress, but, carrying their complaint to Peking, they secured exemption from further annoyance.

GENERAL ADMINISTRATION OF GUILDS.

The officers consist of a general manager; a committee, who are elected annually, but eligible for re-election. In large centers of trade each staple commodity has its committeeman, as at Ningpo. The Fukien guild has three distinct departments—sugar, timber, and miscellaneous articles—while there are also subguilds for several of its prefectures. In small ports the management is often assumed by members in turn. The most important functionary is the permanent secretary, a salaried scholar of literary rank, who, in virtue of his literary position, has the right of personally interviewing the mandarinate, and, as guild delegate, has a recognized official standing. He is a medium of all correspondence, and at the Yamêns appears as the guild's legal representative, pleading for its interests, demanding redress for its injured members, defending and protecting his constituents as occasion requires. He is useful to local authorities in soliciting from his guild subscriptions for public works, charities, and extraordinary exigencies.

The membership seldom exceeds thirty, and when meetings are convened those who attend are not too numerous to consider questions that come up for discussion. Although there are no written parliamentary rules for proceedings, decisions are arrived at with the decorum that befits deliberative bodies generally. Every institution, however, has its garrulous, fussy, crotchety debaters, not less in China than elsewhere. One of the guilds has found it necessary to protect itself against such members; its single regulation reads: "At the public meetings of the guild, should there be any one of higher abilities than the rest, with a plan of his own to propose, whatever his station may be, he must argue and explain the case before all the members. He must not continue to dispute the matter after it has been decided, as such a proceeding is useless when there is no one to second it; that will prevent waste of the guild's time." A further security against useless palaver disallows junior partners attending meetings.

GUILD HALLS.

Chief among edifices in mercantile emporiums are buildings erected by guilds for headquarters—places of meeting, theatrical representations, and as lodging-houses for high officers when traveling, and for scholars *en route* to metropolitan examinations; chaplains—Taoist and Buddhist.

"Women and girls are not admitted to guild halls, to the end that decorum may be maintained."

Sometimes these structures are truly palatial, representing the highest specimens of Chinese architecture; all that the arts of gilding and carving, masonry and sculpture, can effect is done to render guild halls imposing, the most striking portion being a court for theatrical performances in honor of the gods. At one end is a stage; at the other, shrines; in surrounding balconies the privileged witness plays, while feasting and chatting, the open court being free to the general public.

REVENUE.

Funds are raised from self-imposed taxes on commodities sold by the members—assessments varying in amount according to exigencies, averaging one-tenth of 1 per cent., which necessitates a monthly inspection of the books of every establishment, the examination being made by clerks of the various firms in rotation, two being detailed every month for that purpose where the firms are numerous, as of timber merchants at Ningpo. Some guilds levy a higher rate on certain articles than on others, as at Wênchow, where the Ningpo concern exacts 8 coppers for every 1,000 coppers' worth of medicine sold by those members who are engaged in the drug trade, and only 2 coppers from beancake dealers for a thousand-worth of that article disposed of; dealers in other articles are charged, some less, none more, than those charges, the intrinsic value of the commodities forming a basis for the assessment; those who deal in valuable articles consenting to a higher tax than that paid by dealers in coarse goods. The same guild levies a tax of $2 on each Ningpo junk that arrives; in this way the shipping interest pays its quota to the guild treasury. The Canton guild at Shanghai does not now tax the trade of its members, the income from its property sufficing to meet current expenses. The amount of income varies from a few hundred dollars, in small marts, to half a million, as in the case of the druggists' guild at Ningpo.

Inquisitorial proceedings like those adopted by guilds to ascertain amounts at which members should be assessed for the maintenance of the institution are certainly remarkable. In no other land would merchants submit to an examination of their books, yet in no other land is the mercantile character possessed of greater prescience and acumen. The system, however, is made to work satisfactorily, which is evident from the fact that it is self-imposed.

There appears to be some friction in its working, attempts being sometimes made to represent current sales as less than the truth warrants. Punishment is provided against such delinquents by the infliction of fines.

A by-law of the Canton guild at Pakhoi reads: "At the annual meeting members shall hand in duly sealed statements of their contributions for the year, making obeisance in the guild temple in asseveration of good faith. In the event, however, of any account being confused or called in question, it is understood that, notwithstanding the member shall have already testified to its accuracy before the gods, a ballot will be cast to decide whether the member whose account is doubted shall produce his books for the inspection of the members. If the account proves to be false, he shall be fined five times the amount due, and if he refuses to produce his books or to submit to the finding of the meeting, he shall be expelled from the guild."

It appears that in this guild there is no provision for examining its members' books.

GOVERNMENT.

Guild regulations vary, of course, according to the particular traffic which forms its bond of union, a full account of which would acquaint us with the intricacies of Chinese mercantile law. Guilds are tribunals of commerce that enforce laws of their own enactment, by which litigation is narrowly circumscribed, their rules being regarded by the courts as authoritative. A few instances will suffice in illustration.

Members are kept well in hand by laws like the following: "It is agreed that members having disputes about money matters with each other shall submit their cases to arbitration at a meeting of the guild, where the utmost will be done to arrive at a satisfactory settlement of the dispute. If it prove impossible to arrive at an understanding, appeal may be made to the authorities; but if the complainant have recourse to the official direct, without first referring to the guild, he shall be subjected to a public reprimand, and any future case he may present for the opinion of the guild will be dismissed without a hearing." It is not, however, only when disputes arise respecting "money matters" that guilds claim the right to adjudicate, but their intervention is experienced in quarrels generally that occur between its members.

Another rule to prevent members going to law reads: "Among the members of our own compatriots who come here, there are those who engage in business transactions, and have current accounts, as well as in making joint speculations. It is impossible to say that disputes may not arise among them. If anything of the sort occurs, the guild shall settle the difficulty in the manner most advantageous to all. Justice shall be observed, and the facts of the case brought to light, and the matter be decided according to what is right. No concealment must be employed, that justice may be manifested."

"BOYCOTTING."

"It is agreed that, after a member of the guild has been expelled, or a local firm has been expelled by its members, all intercourse with such parties shall be suspended. Any member discovered to have had dealings with them, either from sympathy or friendship, shall be find 100 taels."

Few guilds have articles that expressly provide for "boycotting" persons other than their members, yet the proscription of all offenders is employed to the fullest extent possible, and vast is their power when earnestly exercised.

RULES ON CREDIT, STORAGE OF GOODS, ETC.

Descending to details, we find regulations on specific subjects.

Credit.—Each guild has rules on sales by credit which is peculiar to itself. Here is an example: "It is agreed that, in selling goods, the times of payment thall be, in the case of cereals and the like, forty days after delivery; in beancake, fifty; and miscellaneous commodities, fifty days; infraction of this rule subjects the seller and purchasers alike each to the fine of the expense of a theatrical performance, and two tables of liquors and viands"; entertainments that entail an expense of about $25 to each delinquent.

Storage.—"It is decided that the seller of goods shall warehouse them for seventy days, free of charge, but if they are not removed by the seventy-first day, they shall be charged a month's storage; if not removed at the end of that period, they become chargeable for two months storage the first day after, and so on. Contravention of this rule subjects seller and purchaser alike each to a fine equal to twice the regular amount of storage; the fines to be paid into the treasury of the guild."

Weights and measures.—Provision is made by each chamber of commerce for standard steelyards and measures. "It is agreed that the guild shall keep a standard set of weights and measures, which shall be adopted by all members, that there be no light issues and heavy receipts. Should it become known that a member is using scales at variance with the standard set, he shall be heavily fined." Unfortunately there is no common standard, most guilds and traders having their own.

Tare.—Rules fixing the tare of articles occupy a large space in printed guild regulations, every common article being subject to certain deductions.

Fire loss.—Some guilds maintain fire-engines, and require their members to aid in extinguishing fires. The rules of the Ningpo Shantung Guild make the seller of goods in storage sufferers for their loss by fire for five days after the sale; and when destroyed later, the purchaser makes good the loss. In cases of destruction in civil strife, it is agreed that purchaser and seller shall be equal losers.

Closing and opening of a year.—"It is agreed that no business shall be transacted before the middle of the first month of the year; that goods sold in the tenth month shall be paid for by the middle of the twelfth; those sold in the eleventh be paid for in the second month of the year following; that goods sold in the first month shall be regarded as if sold at the beginning of the second; and that from the first of the second month, the forty, fifty, or sixty days' credit allowed to certain commodities respectively shall commence. It is provided also that goods sold in the twelfth month shall be taken by the purchaser, or be liable to charge for storage."

Police.—Compatriot guilds are to some extent made responsible for the behavior of their members; hence one of the decrees: "That inasmuch as customs duties and octrois for war expenses (*li-kin*) are levied for the good of the state, it behooves all members to come forth with alacrity and pay them. The consequence of attempts at evasion or fraud on the revenue involving fines by the authorities must be borne by the individual implicated, who must clear himself of all trouble as best he can, as the chamber will not concern itself in such affairs." The same guild undertakes to assist in the recovery of stolen property. "Any member concealing a robbery or retaining stolen property, in order to exact a heavy ransom, shall be fined ten times the value of the goods, and if he fail to pay the fine he shall be expelled from the chamber." Rewards are offered by the guild for the capture of thieves.

Fictitious selling and buying.—The concluding regulation of the Ningpo Northern Chamber of Commerce is noteworthy. "It is agreed that, fictitious buying and selling being illegal, this chamber entirely interdicts that to its members. If violations of that law come to our knowledge, we will transmit to the authorities the offender's name; assuredly no favoritism will be shown." A most wholesome rule, and very creditable to the merchants by whom it was enacted.

This offense is not specified in the statutes and criminal code (大清律例把持行市 1883), but that grand monument of Chinese legislation provides against "monopolizing markets"—a law that is exceeding broad, so comprehensive and distensible as to include penalties against mercantile transactions, generally, that are inimical to the public weal. Under it, a gang of coolies who combine to abuse their monopoly of the porterage of a particular landing may be punished; while it takes due cognizance of speculators who corner markets and manipulate finance.

In a recent work devoted to *causes célèbres* (刑案匯覽卷十道光甲午), two cases are reported of imperial intervention in this class of offenses, which seems to have attracted attention then for the first time, being apparently new.

In 1823 a censor memorialized Tao Kuang respecting fictitious traffic in breadstuffs, representing that certain merchants, availing themselves of a drought that was affecting the food supply, in a portion of the metropolitan province—Chihli—had established syndicates for fictitiously buying and selling cereals, none of the crafty merchants themselves possessing a grain of any cereal, affixing their signatures to paper that represented nothing; by which grain fluctuated in price, and was kept from market, greatly to the detriment of purchasers of food for their own consumption. On the censor's motion, His Majesty took up the subject, and ordered Chi-shen (who subsequently negotiated the treaty of peace with Elliot, 1841) to thoroughly inquire into and severely deal with the evil. At the same time the governor-general and provincial authorities generally were commanded to issue prohibitory proclamations against the practice.

Three years later the same censor represented Manchuria as suffering in its food supply from the same causes, unscrupulous merchants establishing firms to conduct fictitious trade in grain, and enhancing its price; whereon the Emperor directed its suppression and renewed interdictions against it in all marts of the Empire. Unhappily, the sons of Mammon generally disregarded these salutary prohibitions, to which reference is made in the rules of the Ningpo chamber, and that form of gambling is very rife, and as facile and safe as lying.

Charity.—Compatriot guilds (*landmannschaften*) are not professedly benevolent institutions, but in one form of doing good they all take part—the coffining of the dead and interment. They either send cadavers back to their native place or establish cemeteries for fellow townsmen where they have been domiciled. In some cases widows and orphans are provided for, and the destitute sent back to their homes.

To many the foregoing will afford sufficient information on the subject, but others probably will be interested in further details at some length. I submit, therefore, the salient features of several of the principal guilds of Wênchow, Ningpo, and Shanghai.

WÊNCHOW DRUGGISTS' GUILD.

Preamble.—From days of yore to the present all occupations have commenced their organizations by establishing regulations, to be subject to modifications by time and circumstances. Accordingly, we of the drug trade, in the reign of Hsien Fêng (having previously been divided into two guilds), united and formed a compact body without reconciling old and new rules, and, therefore, for the past ten years irregularities have occurred, necessitating their codification. Consequently we assembled and agreed on the new rules here subjoined. Henceforth they are to be conformed to in their entirety; their violation, when discovered, will entail the penalty of two plays and liquor and viands for over twenty persons. This notice is given to caution against infringements of the following laws:

"It is agreed that all accounts shall be settled at each of the three terms of the year.

"It is agreed that deductions of 5 per cent. be allowed for cash payments, but not on credit transactions.

"It is agreed that when a member is in debt to another, and transfers his dealing to a third party, the guild shall bring the three members together, and that he shall not be allowed to trade with the latter until he liquidates his debt to the former.

"It is agreed that a member who allows a customer a higher rate for dollars than their market value for the day shall be mulcted.

"It is agreed that a druggist newly commencing business shall pay an initiation fee to the treasurer of the God of Medicine Temple; if failing to pay up the due amount in full, the member who transacts trade with him shall be fined to the full extent of the deficiency."

FUKIEN GUILDS AT NINGPO.

Chief among the guilds at Ningpo, and the oldest, is that of the Fukienese. It resembles a chamber of commerce in certain of its functions. Its constitution, *mutatis mutandis*, is like that of the Canton guild at Foochow already named. While the Fukienese merchants are united in a general guild, they are divided into as many subassociations as there are districts represented by them, each having a separate code. The following synopsis of those of the Amoy, Ch'uan-chow, Foochow, and Hsing-hua throw light on the nature of those organizations.

AMOY-FUKIEN SUBGUILD OF NINGPO.

Preamble.—It is said that well-conducted commerce yields threefold profits, and that the promise of a man of his word is worth a thousand taels. We of the trade who have come from Amoy by sea, a long distance, have for many years harmoniously conducted business at Ningpo, but after the Taiping rebellion our rules of trade were neglected. Now, however, peace having been re-established, it behooves us to improve those regulations for the promotion of sound trade; it is important to have proper methods of a permanent character and expressed in few words, that they may be perfectly comprehended. Commerce has its laws founded on reason, which conduces to concord; and the subjoined have been agreed upon by us.

General regulations.—All dealings shall be in dollars. Promises to pay are to be from ten, twenty, or thirty days (according to commodities particularized). Five days after sale goods to be taken delivery of from godowns; if not taken by that time risks of fire and robbery to be borne by the purchaser.

FUKIEN SUBGUILD OF NINGPO.

Preamble.—From the coasts of Fukien the most distant regions may be reached: and inland its salt, fish, oranges, pumeloes, hair, feathers, horns, and skins, in days of yore were conveyed to the Han River. For the past two hundred years Fukienese merchants have had a good understanding with customers. During the Taiping

rebellion our trade suffered and our hongs were destroyed. On the restoration of peace trade revived and called for renewal and improvement of former regulations to secure the confidence of those with whom we deal, that all may like to trade with us.

Regulations.—Dollars are the recognized currency of the trade. Sixty days is the limit of payment for purchases of paper of Fukien manufacture, and thirty days for other commodities. Promissory notes not to be post or ante dated. Other details respecting packages, together with other rules resembling those of the Fukien merchants, are given.

HSING-HUA SUBGUILD OF NINGPO.

Preamble.—We have heard that in commercial transactions the principles of gain-getting are uniform and constant, and (to employ a classic phrase) including transport, from places of abundance to places of scarcity, and to change places of abode. We came from Fukien to Ningpo for purposes of trade. At the commencement we established regulations for its control, but during the Taiping rebellion they fell into desuetude; when peace returned and commerce recommenced, the following improved regulations were enacted (at a meeting during a theatrical performance in honor of the Queen of Heaven), which we solemnly agreed to follow.

The regulations are substantially the same as those of the other Fukien guilds, and the same enactments for infringements of the laws.

AMOY SUBGUILD AT NINGPO.

Preamble.—In prosperous ports, profits are trebled, but to that end, truthfulness and sincerity are indispensable. We have settled for many years at Ningpo, having come by sea from Amoy, and have had continuous amicable relations with Ningpoese buyers and sellers, but we find it necessary to revise our regulations and formulate new ones, those formerly in existence having fallen into desuetude during the rebellion. The return of peace and restoration of trade have led us to agree upon the following as complete and inviolable by-laws, in order that none may be deceived, thus securing permanent concord between sellers and buyers.

Summary of by-laws.—Purchases and sales to be made in dollars. Promissory notes to be dated the day of sale. For breadstuffs, to run ten days; woods and rattan, thirty days; sugar and miscellaneous goods, twenty days. Five days after sale the articles are to be removed from godowns; after that period, for loss by fire or damage, the seller not to be responsible. For goods purchased on board vessels, when they are once put on board cargo boats, the seller is no longer responsible. The date of promissory notes is to be that of the day of sale, and is not to be altered; they are not to state the day when the money becomes due (that being fixed by the above-named rules, varying according to commodity). It is not necessary to give in the note the name of the godown from which the goods are taken; but when taken from a junk, her name is to be written.

Purchasers are to bring their own steelyards to the godown. The weighing is to be in the presence of the parties concerned. When goods leave godowns or vessels, no corrections in weight are admissible, nor allowance made for breakages or leakages of inclosures of merchandise. No allowance for dried fruits that become damaged after the day of sale. Goods not taken delivery of five days after sale are subject to charge for storage. Three kinds of steelyards are recognized, and the commodities for the weighing of which one or other of these instruments is used are specifically named; each article to be weighed by the steelyard that has been fixed by custom.

CH'UAN-CHOW SUBGUILD OF NINGPO.

Preamble.—It is said that the ways of trade should be equitable and that dealers and customers should be governed by good faith and probity. In establishing commercial regulations, justice should be of a durable character in matters of selling and buying. New and old regulations should be adapted to changed conditions. We came thither a long way by sea, and if we do not stand well here for straightforwardness, we can acquire no wealth; and as the former excellent rules have come to be disregarded, we assembled for improving and supplementing our rules, that there may be no defects. We all hereby agree to select an auspicious day to give a performance in honor of the Queen of Heaven, formally to adopt the rules agreed on, pledging ourself to punish all who transgress these rules subjoined.

General Regulations.—These relate to the size of crates for different sort of sugars, &c. One rule limits the period of credit to twenty days, and declares the goods forfeited to the guild in case of contravention of the law being discovered. Goods

not removed five days after sale to be forfeited to the guild. Abatements that may be made in the prices of sugar are fixed, and penalties are provided for reducing such abatements. Twice a month all steelyards employed by members are brought to the manager for the month, for testing and verification.

SHANTUNG GUILD OF NINGPO.

In the halcyon days of protection and monopolies, the Northern guild (usually called Shantung guild) was one of the most important mercantile bodies in China. Its individual members owned about 140 large junks, expressly adapted for northern navigation, but unfitted for southern voyages. Ningpo was their port of departure, to which they returned—making the round trip from two to four times a year; transshipping northern staples into southern vessels, and receiving from those the products of the south. It was a highly remunerative trade, but antipodal merchants and mariners swooped down on the China seas, clutched its traffic, and the glory of maritime guilds vanished, with their monopoly, forever. Commodities were transferred to foreign bottoms; the stately junks were taken to pieces and made into small vessels, to carry to non-treaty ports, which, foreign vessels being unable to reach, Chinamen were allowed to retain for their own use. This is a somber view, but the case affords a brighter aspect; the removal of restrictions on trade increased the gains of producers, lightened charges to consumers, and contributed to the enrichment of the imperial exchequer. To these advantages is to be added the stimulus which foreign competition imparted to native merchants, who gallantly fight fire with fire; themselves now employing steamers, keeping down freights, and making things in general sufficiently lively, and all for the common weal. The last struggle of this guild to maintain its supremacy was shown in its procuring insertion in the regulations of trade appended to the Tientsin treaty a special clause prohibiting the export of pulse and beancake from Tungchow and Newchwang under the British flag. [That clause has been since rescinded.] But as regards importing those articles into Ningpo, their monopoly is still preserved. Seven years ago the guild issued the following regulations:

Preamble.—We learn that Shun, B. C. 2255, made uniform the measures of length and capacity, and corrected the steelyards; and that, in the early Chou period, measures of capacity were provided and engraved with descriptive characters; that gemmeous weights were made, market hours were fixed, and credit allowed for ten days. Thus it appears that arrangements were made of old for even and fair business transactions—as we now desire them to be.

At the present time the Empire is prosperous, the sea is no longer infested by pirates, and vessels, like clouds, ply from north to south and from south to north. Unless a man's simple promise is worth a thousand catties of gold he will nowhere be trusted. Goods must be transported to the advantage of all concerned. These are axioms.

Times and circumstances change, and old rules required to be adapted to new conditions; to be equitable and conformable to men's feelings, they should be as even as the balance, as uniform at the waveless ocean, and observed with a punctuality as sure as the unerring tides, in order that confidence may be maintained. To that end we agree to the following rules:

Credit.—All purchases and sales to be in dollars. Payment for grain, forty days after purchase; oil and beancake, fifty days; commodities sold in bundles, sixty days from the date of the bill of sale. Infringements of this rule to entail on each, seller and purchaser as well, the expense of a theatrical performance and banquet.

Storage.—Formerly, over half a year sometimes transpired before purchased goods were removed from storage. Hereafter, at the expiration of seventy days, storage is to be charged. [Here follow details for non-compliance with which the guild inflicts heavy fines. Ten days is the limit allowed for removal of goods from junk board. Goods consumed by fire in godowns five days after sale are not to be paid for by the purchaser; after that date the seller is no longer responsible.]

Goods sold in the tenth month to be paid for on the 25th of the twelfth month: purchased in the eleventh month, to be paid for on the 15th of the second month of the new year. Purchases when made in the twelfth month are to be reckoned as if made on the 1st of the second month. Goods purchased in the tenth and eleventh months to be taken possession of before the close of the year.

Weighing.—The ordinary sixteen-taels-to-catty steelyard is the standard to be employed by every firm connected with the guild; weighing to be in the presence of all concerned; no discussion to be allowed afterwards. Short weights, as of fresh red dates, due to cargo-broaching, to be made good by the vessel; allowances for tare and net according to old rules. Details follow respecting all the commodities dealt in; penalties for irregularities and frauds.

Fictitious buying and selling forbidden to members of the chamber; offenders to be reported to the magistrate for punishment. Violations of other rules to be mulcted by the chamber.

Separate sheets are issued relating to porterage and the like. Charges for hampers, bales, boxes, &c., for each commodity, and an additional allowance made as a gratuity to prevent pilfering.

SHANGHAI TEA GUILD.

Ordinarily, guild regulations are printed on red placards and pasted on the walls of mercantile and manufacturing establishments; but the rules of the Shanghai tea guild are too numerous for a placard, being thirty-one in number; they are issued in pamphlet form. As foreigners take much interest in the commodity in which this guild deals, I submit a *précis* of their *brochure*, published in 1871.

The preface states that formerly dealers in tea and silk were united in a common guild, but their hall, having been occupied by French troops during the Taiping rebellion, fell into decay, and was presented to a benevolent institution. Subsequently, the silkmen formed a guild of their own; and gradually every occupation became organized in like manner [implying that, in the earlier period of foreign trade at Shanghai, guilds were few in number and generally insignificant].

Tea dealers also found it necessary to establish a guild, which was the more important in that "commerce with foreigners required to be conducted with good faith and rectitude, and also dealings with country growers, manipulators, and sellers of tea should be equitable; and seeing that, latterly, men's dispositions have grown perverse, and trade thereby rendered more difficult, it is obvious that without such an institution the accumulated abuses of the trade could not be eradicated, nor correct regulations established; neither could needful reforms be effected." This is given by the tea guild as its *raison d'être*. It was established in 1871-'72, and is composed of proprietors of tea storehouses or godowns, who act as the agents for tea producers or proprietors.

Administration.—A committee of twelve is elected annually, each member serving for one month. Members elected to serve on the committee may not decline; the duty is obligatory. When an emergency occurs, the acting member of the committee for the time being summonses several or all his colleagues for deliberation, who are required to be punctual and to transact the business equitably. Any who arrive after a decision has been arrived at shall not be allowed to move a reversal, but shall be mulcted to the cost of a banquet for over a score of members.

A permanent executive officer represents the guild at the Yamêns, and conducts its correspondence. He is a literary character, and conversant with public affairs.

An accountant is employed to receive dues from members. Directions are given touching the mode of keeping books and records, which are to be open at all times for inspection.

Two firms act as treasurers, who are to select safe banks for depositing the guild funds.

A special regulation provides for the appointment of a foreign lawyer, whom the committee may consult when there is need for protecting the members' interests, and who is employed, "not from a desire to litigate, but that when foreign merchants disregard mercantile laws, craftily interpreting it to suit themselves, they may be frustrated." In such cases the manager for the month must repair with several colleagues to the foreign firm to discuss the subject. "In all probability, a myriad to one, it will be satisfactorily adjusted; but failing in that, and the guild member suffering injury, the case is to be committed to our legal adviser."

Revenue.—Members are assessed pro rata on their sales. For every large box of black tea sold they are to pay to the accountant 8 tael cents; less for smaller boxes; and for green tea 6 tael cents; the subscription to be paid in advance on the arrival of the tea at Shanghai—based on the sales of the previous year. Should the current year's sales fall short of last year's, the excess of subscription to be refunded. On the first Sunday of each month members are to send to the guild accounts of sales for the past month, with a corresponding sum as subscription. If understatements are discovered, the delinquent is mulcted fifteen times the amount due by rule.

One hundred dollars are to be paid into the guild treasury by the owner of every new godown, who shall also stand treat for a banquet for forty or fifty members.

Storage.—No charge to be made by members of the guild for storage until the expiry of ten days, after which the charge shall be 1 mace a box of black tea; green tea to be charged according to old rules, whether for a short or long period; but if it extends into the new year, the charge is to be doubled. Any secret, private arrangement to abate godown charges shall entail the infliction of a fine.

Insurance.—Tea brought up from the country by dealers, on which money has been advanced, is to be insured by them against fire; they are not to begrudge that item of expense; but insurance is optional when there are no claims against the tea.

Advances to the country owners.—When subagents are dispatched into the tea districts with money to advance to tea producers, they must act for one firm only. If this rule is contravened, the tea purchased is to be given on its arrival at Shanghai to the firm by which arrangement was first made; and the other firm's money is to be returned. If on the arrival of teas further advances are required, the storage firms will carefully ascertain the quantity of tea offered, and not advance in excess of its value; if more than that is needed, the country tea-trader must provide it himself; his tea will be kept for him two months, and then sold without waiting for a rise in the market.

General rules.—The firm in whose godowns tea is stored are to have the sale of the article, but its sale may be committed to another tea-storing firm on liquidating all claims against it.

Commissions, &c.—The charge for duties paid, storage, interest on money advanced, and commission, shall be 4 per cent.; 3 per cent. if money has not been advanced.

Erstwhile, frauds in the tea trade were unknown, but of late years tea-producers frequently employ secret marks to indicate different qualities of the herb, and deceive purchasers by false samples, which when it comes to be weighed is discovered, causing contentions, which foreign merchants avail of to depreciate the whole lot, demanding abatements in price, all which is subversive of equitable mercantile ways. We now write to the hill tea districts, requiring uniformity in the quality of the staple, and conformity with samples.

When tea is brought to Shanghai for storage, boxes shall be opened indiscriminately. If, perchance, the article does not correspond with the muster, Chinese and foreign merchants shall be called to examine the whole lot, the contents of all the boxes to be turned out for public inspection. If the examination shows the tea not to correspond with the sample, those present may decide what should be done in the matter. If tea-tasters unjustly depreciate a chop, the case shall be submitted to arbitration to make equity manifest.

"*Boycotting.*"—Pending litigation with a foreign firm, members of the guild shall transact no business with the derelict house; intercourse is not to be resumed until the case is adjudicated. Should any member secretly violate this rule, and it comes to the knowledge of the guild, the offender shall be condignly punished.

Porterage on tea purchased by foreigners and conveyed for them to steamers is to be paid by them. Recently, however, they have demanded that the expense of such porterage be paid by native merchants. In cases of that kind complaint is to be made to the manager of the guild at the time, who shall remonstrate with the foreign merchant. If the offender persists in the demand, he shall be tabooed. Should any secretly consent to the charge, punishment shall be duly inflicted.

Regulations.—An unopened box of tea, taken to the foreign dealer as a muster, and if not weighed by him, its weight must be taken as given by the teaman when delivered, who is not to be required to make good any deficiency. A box already opened must be weighed on the spot and its weight recorded. If the muster is returned, it must be again weighed—a catty or two missing is of no account; but if more, it must be paid for. An unopened muster box is to be opened on the spot and its weight recorded; and if the bargain is not completed, the muster must be again weighed; and if more than a couple of catties of tea are missing it must be paid for.

For binding tea boxes with rattan [which is done by the foreign purchaser] eight taels per 100 boxes is to be allowed him—albeit the cost is only five and a half taels. When more than that amount is demanded for rattaning, appeal is to be made to the acting tea guild manager for the month and others to remonstrate with the foreign firm, in order that there may be uniformity. Any tea-dealer giving more shall be dealt with by the guild.

Duties on teas brought to Shanghai from Hupeh and Hunan shall be paid at Hankow by agents of storage firms, and charged at the then value of sycee. Insurance, porterage, and freight from the tea districts to Shanghai, and river insurance shall also be paid by storage firms. Heretofore no charge was made for interest on advances for such expenses, but now money being scarce (and losses accruing from loans), there shall be a charge at the rate of fifty tael cents per diem for a thousand taels = 18 per centum.

Teamen arriving at Shanghai in need of advances from the godowns to be accommodated when the value of their stock is ascertained; but no money shall be advanced beyond the value of their stock; or if more is given to them, they shall repay it; failing to do so, their tea shall be sold at the expiration of two months.

It shall be sold by the guild after communicating with the mandarinate. If money be still due on the tea judicial proceedings shall be instituted to enforce the claim. Should the tea bring more than the amount of claims against it the balance is to be paid to its owner. Storage hongs must be cautious and not advance more than the tea is likely to fetch.

The storage hong should be allowed to purchase the tea that it receives on storage, unless the teaman can get a higher price elsewhere, when he is to inform the custodian of his tea, who shall allow him to take it away on payment of charges. If the offerer of a higher price fails to fulfill his promise, he shall be punished by the guild.

Porterage of black tea from the godown is to be defrayed by the godown hong; if it is charged to the teaman, he may inform the guild manager for the current month and the guild shall decide on the punishment to be inflicted.

Insurance.—Tea stored in Shanghai on which advances have been made must be insured against loss by fire. Teamen must not begrudge the expense. If no money has been advanced, the teaman may do as he likes as regards insurance.

The guild hall being for the transaction of public questions, it shall not be used for traveling officials as a temporary hotel, nor for mercantile guests; nor shall women be allowed to lodge there, in order to illustrate the important rules of decorum.

Semestral meetings shall be held for reconsidering the rules of the association, and for the worship of Kuanti (god of war), the first to be held on his birthday, 13th of the fifth moon; the other, 13th of ninth moon.

SILK GUILD.

The rules of the silk guild vary so much from time to time, according to exigencies of trade, that it has ceased to have them printed, and no member can be prevailed on to furnish a copy or to state what they are. Two examples have been recently furnished of their fluctuating legislation. It was suddenly decreed that instead of silk being paid for by the purchaser on the day immediately following the departure of the mail, the account was to be settled as soon as the commodity was weighed; a rule that was observed for a few months only, when it was disregarded and finally duly abrogated. Again, an order went forth that muster bales of silk should be weighed separately, and the bulk weighed to the half-pound only, disregarding fractions; and a prohibition was enacted against tenders of sale on firm offer to consuming markets in Europe and America by wire.

BANKING.

I devote considerable space to the regulations of banking institutions, for the use of those who are studying the intricacies of Chinese finance.

NINGPO BANKERS' GUILD.

A few years ago the constitution of the guild underwent a change for the better, which is undiscoverable in its present rules. It was until recently the practice of bankers of that city to hold sessions twice a day in a thoroughfare that may be denominated the "Wall street" of Ningpo, for the purpose of speculating in the market value of dollars as quoted in the next dispatches from Soochow, or from Shanghai when that port took the place of the former as money mart. To a stranger the spectacle presented the appearance of a crowd of excited madmen escaped from confinement. For more than an hour every forenoon, and for the same time every afternoon, they thronged the street, so as to render it almost impassable; all the time vociferating, so that the din was deafening, and business had to be conducted by dactylonomy, indicating by fingers fractions of sums for which dollars were offered for sale, or sums which buyers were willing to give—*e. g.*, $10 would be offered for sale by outstretched digits at 1,180 coppers; if accepted, bull and bear retired and made a record of the transaction, and on the arrival of intelligence from the money market, if the dollar varied in value a copper from the figure fixed upon, one paid the other 10,000 coppers. Sellers and buyers were generally brokers, having for constituents bankers, money-changers, merchants, traders, scholars—all classes, in fine, were so fascinated by this form of gambling as to plunge wildly into a vortex of speculation. More dollars than the city contained would be sold and purchased in a few hours. Occasionally a check would be imposed on the maniacs. When insolvency and suicide followed a disastrous speculation, a magisterial proclamation would be fulminated, interdicting "fictitious dealing in dollars," and for a time a Sabbath stillness would pervade change; but soon official vision would be

blurred by a process known to all mankind. "Wall street" again became as lively as ever.

I once took Sir Rutherford Alcock to witness the spectacle of bidding on the prospective value of dollars; he pronounced it one of the most striking scenes he had ever witnessed. Ultimately the evil effected its own cure. When native speculators at Shanghai had floated various giant stock companies, and the gambling in shares became rife, Ningpo became more than ever infatuated by the dollar-jobbing mania; and when the crash took place at Shanghai, great defalcations were discovered at Ningpo, involving chiefly young clerks and bankers' sons. Ruin was brought upon many, and suicides by opium or drowning followed to an unprecedented extent. These disasters moved the money-dealing community to suppress fictitious dollar-dealing, by forbidding the practice to its members; but a class of brokers had come into existence which did not recognize the guild. Sham dollar-selling had become a profession in itself, and was employed by the gambling public generally. Bankers petitioned the magistrate for a proclamation against the brokers who had organized a guild of their own, and which threatened disobedience and resistance; they were only placated by receiving aid from the authorities until they found other occupations. Thus a custom that had existed long anterior to the first appearance of dollars, about 1726, ceased at once; before that date the value of silver ingots in coppers was a subject of speculation from an unknown period.

Now all the meetings are restricted to the guild hall, on the walls of which are the following regulations:

Preamble.—In examining the chapter on "Affluence through trade," in Sz'-ma-chien (the so-called Herodotus of China, *circ.* B. C. 163–85), we find his thoughts on "the increase of goods" [in a biographical sketch of Kuan Chung (about B. C. 645), among the most illustrious statesmen of Chinese history, who was originally a merchant]; and in the Analects we find a weighty remark of Confucius, who says: "There is a great course for the production of wealth. Let the producers be many, and the consumers be few. Let there be activity in the production, and economy in the expenditure. Then the wealth will always be ample." Consequently, those at hand will be gratified, and others assemble from a distance, and amicable mercantile intercourse becomes protracted, as a natural result.

Our profession of money-dealing originated on the establishment of the nine bureaus of the treasury department of the Chou dynasty (B. C. 1122). But the division into five degrees of weights dates from the Han era. It is of urgent importance that those who have should be able to exchange with those who want, and that small coppers should be exchanged for large ones—for convenience of the people on the one hand and for government finances and taxes on the other; in fine, our occupation is the pivot of commerce.

Then follows an account of the vicissitudes of the guild during the Taiping rebellion; of the "happy restoration of peace through the combined military operations of Chinese and foreigners; the revival of trade; the encouraging prospects of the future," and a devout wish for continued peace and prosperity, through accumulations of goods and double profits. Next, reference is made to their abandonment henceforth of paper money, and to the decision to restrict all transactions to ingots and dollars, owing to the changed condition of business affairs [of their accord bankers then made an end of free banking, which had led to many evils, though the chief reason for the change was the transfer of the money center from Soochow to Shanghai, which being now so near in point of time rendered paper money unnecessary], and at a meeting convened for the purpose they agreed to conform to Shanghai usages in monetary transactions generally. The regulations then adopted are to be binding on all, without prevarication, all agreeing to circumspection from first to last; to be equitable and diligent in the right mode of acquiring wealth. "Let all the gentlemen composing the guild co-operate in promoting the business of the port by correct and sincere endeavor."

The first rule is creditable to the Ningpo bankers. It reads: "Amicable intercourse with foreigners has long subsisted, and it is incumbent that in commercial transactions we should embody the liberal feelings of the Emperor, and not fail to act in accordance with his intentions."

Summary of thirteen rules then follow.

Administration.—A treasurer and a managing committee of twelve to be elected annually. The treasurer at the close of every month debits each member with an equal share of current expenses. Managers serve each one month by turns. Early every morning a manager must be present at the guild [which then becomes a clearing house; each member bringing or sending his books, the bankers exchanging each others' drafts and settling the differences. Nothing under $50 to be noted; all irregularities mulctable. An initiation fee of $10. Sums accruing from such fees are placed at interest.

Currency.—Dollars and ingots (Mexican and Carolus dollars) to be taken at their respective values [Carolus, being heavier, at a premium] in copper or ingots. Eight descriptions of dollars not to be accepted—"light weight," "indistinct," "oily-like," "dull sound," "three-starred," "heads upside down," "coarse-edged," "thin-edged," and "yellow-tinged." Ingots of 45¼ taels to pass current for fifty; but when further short of the standard weight the deficiency to be made good [of course fifty-tael ingots disappeared from Ningpo, or when used were at a proportionate premium]. Ingot and dollar deposits and payments to be made between noon and 2 p. m.

Interest.—Interest on accounts of $500 and upward to be paid at the ruling rule of the day. No one shall be pressed to lend money.

Sundry rules.—Promissory notes deposited by the promisee are to be made good by him in the event of bankruptcy of the promiser. The seals of members to be stamped in the duplicate books of regulations, minutes kept by the treasurer and the managing board.

SHANGHAI BANKERS' GUILDS.

A satisfactory account of the Shanghai bankers' guilds would include a survey of all the intricacies of Chinese banking, on which my information is scant, and, besides, I lack the financial capacity to make the best of the documents before me, which consists mainly of numerous sheets of printed regulations.

As usual in guild promulations, there is a classic preamble, which in this instance represents that "inquiry discloses that ways of commercial wealth have been transmitted by sages" [allusion is here made to Tzŭ Kung, one of the most famous disciples of Confucius, who acquired a fortune by trade before he devoted himself to learning]. "The 'carrying of cloth to exchange it for silk' (a phrase from the book of poetry compiled by Confucius) has been conducted from age to age without intermission, and imperial statutory laws have regulated money matters, which have been conducive to profits and repressive of abuses."

The bankers could add little to the above of an archaic character. No Chinese antiquarian that I wot of affords information on the early history of banking, although changing, depositing, and loaning money was doubtless almost coeval with money coining. At an early period we find emperors lending money to their lieges on interest. According to the Chou-li—"Polity of the Chou dynasty"—and commentary a "money bureau" was established under the control of four officers, to whom imposts on commodities were paid and who loaned money to the people from whom labor was exacted as interest on the loans, the amount borrowed to be returned at the end of the year. This unique department also purchased unsalable goods, storing them until they could be disposed of at the same price at which they were bought; and lending sacrificial utensils for ancestral worship for the period of ten days, and funeral paraphernalia (mourning habiliments) for a month, without charge, paying over to the Emperor at the close of each year its surplus funds. Wu-ti, B. C. 179–141, committed to two officers the function of lending money on interest.

Two other instances occur in Chinese history of imperial money-lending. The usurper Wang Wang (A. D. 9–14) lent the smallest sums of money to his subjects at 3 per cent. per mensem. He was a merchant as well as banker, purchasing commodities when they were cheap and selling when prices rose. In this he claimed to be conforming to ancient precedent.

The other case of imperial banking was in A. D. 1068–85, when the reigning Emperor lent semi-annually to his subjects sums of ten thousand cash, charging two thousand interest for the half-year. His usurious majesty also lent grain, but at higher interest. Money-lending to the state has never been in vogue; certain not infeasible reforms must precede such an exhibition of confidence.

Then there is the name of a famous banker of the former Han era (B. C. 32), Ku Yung, who received money from the affluent to lend to the impecunious, he receiving a commission for his agency. It is not likely he was the first of that vocation; but it was then, probably, modern, coming into existence with the extinction of feudalism.

Returning now to Shanghai bankers, we find their guild has been divided for convenience into a northern, the principal bank, the Yang-king-pang Creek forming the dividing line. Besides their common hall, each has a *Kung-so*—exchange or clearing house; that of the northern is situated in the Ningpo road.

The guild seems to date no further back than the reign of Tao-kuang and subsequent to the opening of Shanghai to foreign commerce. In that and the following reign regulations for conducting business were adopted; but the increase of bankers whose hearts were not like those of the founders, and commerce becoming depressed, those excellent rules fell into disuse, and thus at the present time out of every ten bankers eight have succumbed [this refers to the recent rise and fall of joint-stock

companies on shares of which advances were made, involving banks in their ruin].

In view of the stagnation of business, they felt it incumbent to meet and confer on the re-establishment of good rules, just as trees, to be made to thrive, require their roots to be made firm. They met and agreed on the rules that were adopted in the reign of Tao-kuang and Hsien-fêng. These, fourteen in number, with improvements, I summarize as follows:

Charges for cashing notes.—"It is agreed that no deceit shall be practiced in recording receipts and issues of Shanghai current silver. Dealers in piece goods, Canton, Fukien, Szechuan, and Hankow commodities, and opium, and also Kiangsi traders and merchants generally, whose checks are presented by foreign firms, shall be debited with a charge of half a tael for every thousand cashed."

[This is a new regulation; the reason assigned for its enactment is that those are demands for specie to be paid at sight. Some expense is liable to be incurred in getting ingots, particularly when trade is depressed; also because there is loss on odd sums.]

For the same reasons a charge is made of three mace for a thousand taels on notes cashed for Ningpo, Shaoshing, Hangchow, and Soochow. The same charge is made against the issue of checks to Kiahsing, Wuchow, Fukien, and Yangtze ports, and to Shantung and Chihli as well.

Interest.—A new rule suppresses a most usurious practice that has arisen among Shanghai banks, to wit, charging $10 for ten days' loan of a thousand dollars. A small interest is allowed on deposits that are unemployed by the bank, and when money is in demand, the amount of interest payable, and the amount to be charged to borrowers, is to be declared by all the banks on the fifth day of each month (determined at a guild meeting). At the close of each month an account is to be rendered to depositors. On the 15th, the rate of interest for Shanghai shall be declared (that of the 5th being for other ports).

On money advanced on tea and silk, interest is chargeable at the rate of half a tael per diem; accounts to be presented at the close of each month. In transactions between banks of exchange, the guild banks' interest is chargeable by each, 2 mace for a thousand taels.

[These banks of exchange are the agencies of the great bankers of Shansi, who remit funds to all parts of the Empire, and are in nowise connected with the Shanghai Bankers' Guild.]

Miscellaneous.—Deposits not made by 4 p. m. are to be reckoned from the day following. [Per contra, bills are not cashed until near that hour; if demanded in the morning, a slight discount must be paid.] In paying customs dues there is a specified charge for a hundred taels. Packages or boxes containing ingots are to be opened and the silver taken to the guild assay office for examination. [Assaying is sufficiently simple, consisting in gently holding the sycee to be tested in one hand, and grasping firmly the ingot with which to strike the other, the ring of the metal struck determining its quality].

Notes of Fukien sugar dealers are subject to a discount because of the inferiority of the ingots of that province. Notes having on their face "Payable by either northern or southern branch of the guild" are not to be received.

Regulations of the Northern Branch of Shanghai Bankers' Guild.

Dollars.—In paying out new dollars the issuer must imprint them with his seal [washing out the previous imprint], otherwise they shall not be current. Disregard of this rule entails a penalty. According to former rule, ten kinds of dollars are uncurrentable—to wit, the light, dull-colored, flowery-spotted, dull-sounding, copper-alloyed, edges unusual, three stars, circles (?) on the reverse, head upside down, yellowish hue, white—to which is now added such as have unusually fine edges.

Sycee.—Bills from or to foreign banks (and merchants generally) that accompany boxes of ingots are not to be altered; they are to indicate the number, weight, value in dollars, the premium or discount, all in capitals, not in running hand; also the date, the bank by which issued, and seal, in order to prevent irregularities. New bills must be out—descriptive of the ingots; when any are taken out of the lot, the old one to be canceled.

The bills accompanying sycee that are issued by the hands of the guild are for outsiders only, and not for guild banks intercirculation [those of the northern branch are at a premium, compared with the southern]. When payments from foreign banks to guild banks are in ingots, a descriptive bill is to accompany them, having first the seal of the foreign bank; that when found deficient, they may be returned. When the amount of ingots to be paid by a foreign bank exceeds fifty [as a rule there are fifty to a box], the balance is to be paid in notes. When a guild

bank has to pay a foreign bank less than fifty, it must make out a descriptive bill, and seal it. When inferior sycee is paid by a foreign bank, it is to be returned the next day by noon (or if Sunday intervene, on Monday).

Miscellaneous.—Checks for less denomination than $10 are non-receivable. Guild banks having notes to be cashed at foreign banks shall present them before 3 p. m., except on Saturdays, when they shall present them by 11 o'clock a. m. When a foreign bank pays to a guild bank a round sum in ingots, the latter shall make out a bill for the balance.

Regulations of the Southern Branch of Shanghai Bankers' Guild.

Interest.—Loans of ingots are to be charged at the rate of 7 mace per diem for $1,000; the smaller charge for dollars is in conformity with orders from the mandarinate. For all checks cashed the sender is to be charged as under the old rules, from 3 to 5 mace for every 1,000 taels.

Against speculating.—In buying and selling dollars and ingots, all settlements must be made on the day of the transaction, that thereby there shall be no empty buying and selling. [This rule also is conformable to magisterial mandate; until its fulmination, not long since, the exchange of the northern branch of Shanghai banks exhibited the same maddening scenes as those which occurred among Ningpo bankers, as already described.]

Clearing house.—Each money dealer must send his books to the exchange twice a day, to square accounts, under the supervision of the manager for the month.

When orders are made payable in old dollars, old dollars are to be furnished; but when the kind of dollars are not specified, payment may be made in those in ordinary use by the bank.

These rules, supplementary to the old ones, conduce to the promotion of business. We unite in establishing them, and they should be loyally observed; their infringement shall be inquired into, and summarily punished.

Besides the above regulations, the general, as well as those by the two branches of banking guilds, there are old ones, written and unwritten, that govern banking, but these suffice to disclose the nature of the guilds.

In no other occupation is such liberty enjoyed. Nearly all others are compelled to be associated in those combinations, while more than half the Shanghai bankers act independently of the two guilds of that port. There are belonging to those guilds only 55 members, while the non-member bankers number 75, who, however, conform to guild regulations. Besides these 130 banks, whose business is mainly local, there are 18 Shensi and Peking banks of exchange; and, finally, there are 150 money-changing shops, wholly engaged in changing coppers for dollars.

GUILDS AND FOREIGN MERCHANTS.

In the history of foreign intercourse with China, the Co-hong Guild of Canton stands prominent as enjoying a monopoly in trade, as collectors of duties,* and as the sole medium of communication with foreigners, mercantile and official. Established in 1720, it continued until by the treaty of Nanking, 1842, it was abolished. Its spirit, however, animated so many that monopolies called for further measures of repression. In 1847 it was stipulated that foreigners are to be admitted to trade with any and all subjects of China, without distinction; they shall not be subject to any new limitations, nor impeded in business by monopolies or other injurious restrictions. Eleven years later the French treaty provided: "No privileged commercial society shall henceforward be established in China, and the same shall apply to an organized coalition having for its end the exercise of a monopoly on trade, the Chinese authorities to dissolve such associations, and to prevent the existence of any by prohibitions, so as to remove all that may stand in the way of free competition."

Considering that those attempts to suppress long-established institutions were forced on the Chinese, and considering also that many foreigners have systematically evaded their own treaty obligations, monopolies have been kept tolerably well in hand. Still, as Consul Giles remarks: "Several collisions have occurred that at the time attracted considerable attention, but which are now well-nigh forgotten." Some of these are here recorded, as further illustrative of the making of those patent engines of Chinese commerce.

For more than a fortnight the export and import trade of Swatow suffered a total cessation in consequence of resistance to an attempt by native merchants forcibly to abrogate a customs rule which required cargo boats to bring goods to the customs jetty for examination; frustrated in that, the guild (not in its official capacity, but

*Custom-hous were first established by the Sung dynasty (reign not given), A. D. 960-1126.

anonymously, the act being illegal) addressed a circular to all the ports, stating that, after a fixed date, Swatow merchants must cease to receive or ship merchandise or to charter sailing vessels or steamers. After the period named, two vessels that arrived had to have their cargo stored in their agents' godowns, the consignees not daring to apply for it from fear of "boycotting." Above 2,000 coolies were thrown out of employment. Thirty-five steamers suffered heavily from the suspension of trade. Emboldened by successes in "boycotting" merchants, the guild felt strong enough to beard and defy the authorities, for which the guilty were so condignly punished as to be deterrent of future enterprises of that description.

In 1883 a long-pending dispute between tea guilds and foreign tea merchants at Hankow came to a crisis, the former complaining of variable and false weights used by the latter, an abuse which they proposed to rectify by appointing an approved foreigner, to whom they were themselves to pay a liberal salary, who should act as umpire in all disputes anent tea weighing. Foreign tea dealers objected, not being willing to have an outsider on their premises when that operation is going on; and they convened a meeting at which it was decided to cease buying tea until it could be procured as under former usage. On that the native tea men "tabooed" the foreign firm, which, when it entered the market, found no tea men were allowed to send tea to a dissident merchant. Tea trading was totally suspended. Complaint was made to the Taotai, who declined to interfere on the ground that it was a matter entirely between native and foreign tea merchants. "Boycotting," however, soon set the wheels of commerce in motion. Had both parties been able to resort to that agency the quarrel would have been protracted and damaging to all concerned, but in that foreigners were impatient. The resolution which held them together was like a ligature of sand; they caved in, while every member of the guild stood firm. Some, it was believed, were rather shaky, but fortified by threats they neither budged nor flinched. Perfidy on their part would have exposed them to fearful persecution, while the financier's disloyalty merely subjected him to ostracism. In both cases the intent and spirit of the sanction was the same.

The victory gained by the guild was turned to no mischievous account. Subsequently at a meeting of the Shanghai chamber of commerce a member frankly remarked on the correspondence that had taken place between the chamber and the agent of the tea guild that he thought "it casts a very great reflection upon a large portion of the community and a reflection which they deserved."

An imbroglio at Ningpo is now taxing the acumen and tact of men in authority. Merchants at that port complain of "boycotting" by guilds or syndicates. No member of a guild is allowed to transact business with a foreigner without its assent, which is tantamount to a total prohibition, the penalty being boycotting—interdiction of all business dealings with the proscribed, a prohibition that extends to native traders generally, though not guild members. It is contended that this is a violation of the intent and spirit of the treaties; at the same time Consul Cooper shows it would be difficult to suppress the evil: "For, apart from the extreme unreadiness of any sufferer to give evidence against them, their establishment is in accordance with Chinese usage and is, moreover, a convenience to the provincial government, and even a source of profit."

The complication at Ningpo is due to the farming out of war octrois (or *likin*) to guilds and to the monopolies thus created; these are the foreign shirtings, foreign and Cantonese, coal and iron, tin and zinc, and opium guilds. That farming was brought about by foreigners themselves.

To save merchants the inconvenience of paying octrois at numerous inland stations, it was provided by the treaty of 1858 that transit dues on articles purchased inland and transferred to a port, or conveyed from a port to an inland market, might be commuted by payment of a single charge—a satisfactory arrangement; but on the imposition of the war tax foreign merchants claimed to have it classed with transit dues, and the advantage which passes gave foreigners over Chinese caused native merchants to engage foreign merchants to personate them, procuring passes in the foreigner's name, an evasion that led to the extension of the privilege to the natives, and next to the establishment by them of special guilds which arranged with the authorities for the commuting all the inland imports on their particular goods. In this manner the monopoly complained of had its origin—farming the inland revenue.

Opium was the first commodity fixed upon to monopolize; the transactions of monopolists during the last decade at Ningpo are illustrative of what was done or attempted elsewhere. The opium guild determined to monopolize the country trade in the drug, and disallowed foreign merchants to sell to any but themselves; the combination notifying foreign dealers that infringements of the interdiction would cause all dealings with the disobedient to cease. In this manner country dealers were obliged to pay much more for opium than the market price. At the

same port a man from Swatow attempted to engage in the opium trade, but the opium guild, composed of Fukienese, issued orders that no persons should have dealings with him; and even foreign merchants were obliged to obey the behest, and the guild stifled competition.

Despotism seems to be as ancient as the institutions themselves, in East as in West; it is inherent, the natural cause of such combinations; without unanimity, they are comparatively impotent, and to secure that end they resort to despotic measures. They are monopolies also, yet being amenable to law, and as we have seen, to reason, their utility, it must be conceded, is more obvious than their mischievousness.

Consul Giles remarks: "Foreign merchants regard them with a certain amount of awe, for they are often made to feel keenly enough the influence which these institutions exert over every branch of trade." As against political usurpation of one or many, the price of liberty is eternal vigilance, so with regard to monopolies, which always aim to encroach, the only remedy is watchfulness. True, but when foreign merchants come to understand those institutions better they will discover that but for them the course of true commerce would not run as smoothly as it now does; these chambers of commerce or temples of Themis, in which the goddess is not blindfolded, but has her visual organs in full play—these temples are courts in which equity and common sense are usually in the ascendant. A single illustration must suffice to adduce out of many that present themselves. Very recently a merchant found in a certain transaction that a broker with whom he was conducting business had the "whip-hand." In the dispute, justice was on the side of the foreigner, while technically the native enjoyed an advantage. It was open to the merchant to bring the case before the mixed court—a course that would have been simply ridiculous—but he proposed to submit the case for arbitration to the guild to which the broker belonged; to avert the drastic proceedings which that proposition would entail, the broker instantly came to terms. It is not always a fearful menace for one foreigner who has been injured by another foreigner to institute legal proceedings against the derelict. It is too well known that, owing to the glorious uncertainty of our jurisprudence, offenders often escape with impunity; whereas in guild tribunals ethical are of more weight than technical considerations; and they are not to be regarded in the counting-room as mischievous bogies.

PART II.—TRADES-UNIONS.

The second class of guilds, denominated *Kung-so*—"public halls"—is generally composed of retail traders and artisans, and are of yet more recent origin than the mercantile associations, few of them being a century old. Early germs from which they arose are discernible, but as they now exist they are modeled on the *Wei-kuan*. It is remarkable that, although subject for many generations to the same environment, shopkeeping and mechanic classes should not sooner have formed organizations to avert the mischiefs of competitions for mutual aid against the cheapening practices of society and against official interference. With regard to mechanics, the unions are generally composed of masters and workmen, united as against society. In some trades where workmen are numerous, journeymen have their own organizations, but generally, when they have occasion to combine against employers (of which instances are rare), they meet in some temple, commence a strike, peacefully accomplish their object, and disband. Every union has its regulations printed on red paper, sometimes beautifully gilt, which are posted in stores or workshops. A familiar saw says: "Human occupations are 360 in number." Only those callings, however, that are common are found associated in societies. They present so much uniformity that translation from a few will suffice to show their general features.

NINGPO FISHMONGERS' UNION.

This is regarded as among the most wealthy associations in the country. Its reserved fund is estimated at $700,000, which is lent to banks and pawnbrokers at half of 1 per cent. interest, that charge being marvelously low, for greater safety. Their regulations read:

Preamble.—We have heard that, in trade and mercantile transactions generally, sincerity and good faith are of prime importance, in order that neither seller nor purchaser should incur loss. Our union desires that transactions should be satisfactory to both parties. We have long been engaged in fishmongering, and the rules originally formed having become partially obsolete, we now remodel them to meet changes, hoping that, both dealers and purchasers being upright, these regulations will ever after be conformed to.

Regulations.—First. It is agreed that boatmen conveying fish from fishing stations, who place sand in the bottom of hampers, fraudulently increasing the weight, shall be mulcted to pay for a theatrical performance.

Second. It is agreed that we keep standard steelyards, and inflict the same fine on any of the union who keep fraudulent instruments.

Then follow other rules relative to allowance to be made for weight of hampers of various sorts, and different kinds of fish, and one requiring information to be sent to the office of the guild on arrival of a boat, and a manifest of the cargo, which if on inspection is found to be correct, receives the guild's seal, and the fish may then be purchased by the members. And, lastly, the tariff of charges is exacted from the fish-carrying boats. Ultimately, those charges are paid by the fishmongers, which they find a convenient mode of collecting the tax they impose on themselves for the common treasury. No member of the guild would presume to purchase a cargo of fish that had not been duly passed by the guild. A deposit of $3,000 is made by every fish-dealer into the guild treasury, as a guarantee of conformity to its laws, repayable on withdrawing from the association.

WÊNCHOW BLACKSMITHS' UNION.

This is of the class that comprehends both masters and journeymen. A meeting was recently convened for the purpose of increasing the price of their manufactures, consequent on the reduced value of dollars, and to establish a new tariff. It is curious to observe how Nevada's plethora of silver has deranged industry to the ends of the earth. The blacksmiths, like all who have a statement to make, introduce it with a preamble, setting forth reasons for action. They say:

"The metallurgic art existed in high antiquity [prehistoric]; in the Chou era vases and tripods [for religious use] were cast, as we learn from the book of odes; thus our manufacture has been followed for thousands of years, and traffic in its products has suffered no interruption to the present day. But recently, we who are engaged in casting pots and kettles and in forging iron utensils have discovered that, owing partly to depreciation of dollars, and partly to increase of public work, our by-laws, for protection, require to be more definitely defined [the 'public work' refers to a *corvée*, which in a mitigated form has come down from feudal times, exacting from artificers and laborers service at less than the current wages]. We therefore convened a meeting at the Palladium temple, and during the theatrical entertainment and feasting, we agreed on a new tariff of wages for work and price for our manufactured wares. [Trades-unions which, as in the case of blacksmiths and iron founders, are too poor to own a hall, meet in the city temple for deliberations, on which occasions a Thespian entertainment is provided in honor of the tutelary god, and a feast for the members, who, while enjoying the play and viands, discuss and decide questions relative to the interests of the craft.] Any infraction of the rules hereunto appended will be punished by inflicting a fine of a theatrical performance and three tables of liquor and viands."

Forty-four articles are enumerated; the price, the value of the iron, and of the labor bestowed on each article being separately stated.

WÊNCHOW CARPENTERS' UNION.

Another instance of resistance to the *corvée* system is furnished by the following manifests lately posted up in carpenters' shops:

"*Important Notification—Revision of Rules.*—Our trade is represented before the mandarinate by five head men [selected by the carpenters from their craft, who are recognized by magistrates, and on whom demands are made when repairs of yamêns are needed], who undertake public works. Heretofore they have conformed to rule, exacting one day each year for our employment for mandarins, for which one hundred coppers per diem was paid, and three meals, and in lieu of that service, an exaction of a hundred cash. But now there is a demand for additional service, which we refuse to render, or to pay money in lieu thereof, and there are none to perform needful repairs of the public offices. On this emergency the mandarinate have ordered us to elect five other head men, who shall act in accordance with established rules, that hereafter no more than one day's work in a year shall be exacted of us, nor more than a hundred coppers in commutation for such service. This we have done; and we have agreed that when any member of the union refuses to pay that amount, the newly elected head men shall mulct the masters who employ them." This strike, like all others that take place, ended in the triumph of wage-earners.

WÊNCHOW COPPER WIRE-DRAWERS' UNION.

This consists of journeymen, who, feeling the pressure of the times, made a demand on their employers to abandon the practice of deducting ten per cent. from

their wages (in this place a common abuse), and for an increase of pay. Their preamble sets forth their inability to maintain their families through inadequate compensation for their labor; and adding that their toil requires an extraordinary amount of physical exertion; therefore they had met before the gods, whom they had honored by a play, and had come to the conclusion to make demands hereto affixed. These were an increase of pay, pay to the full amount, and their work to be weighed by steelyards of a certain standard. All these terms were agreed to, and are to be seen posted up in every copper-wire shop. Attached are the usual penalties.

WÊNCHOW SILK-WEAVERS' UNION.

The rules adopted in 1842 having fallen into disuse, they were revised in 1876, and printed, and enforced.

"It is agreed that members of the association shall work carefully and with their best skill, and pay for silk that has been damaged by bungling." Then follows a scale of wages for piecework, the various articles of manufacture being enumerated; being an advance on former rates.

Journeymen.—It is agreed that a hand who is employed by one manufacturer shall not surreptitiously work for another—penalty for transgressing, a theatrical performance and a feast for over ten. Pilfering silk from employers—to be expelled the trade; the purchaser to be fined a play and a feast for over ten. No employer shall engage a journeyman if that hand is in debt to his master; but when all debts are paid he is at liberty to enter the service of another; but an employer who clandestinely engages a hand from another shop shall be fined, as above.

At the beginning of a new year workmen are at liberty to make engagements in other manufactories, provided their debts are all paid to former masters. If they persist in leaving without a settlement, the trade-union shall pay his indebtedness, and no shop shall be allowed to employ him. In the case of journeymen who are dismissed from a shop while in debt to their master, the new employer shall make deductions from their wages until the debt is liquidated. No workman shall enter into business on his own account, nor into partnership until his debts are paid.

At the commencement of a year masters shall advance to journeymen [from two to four months] wages [the wages vary from $4 to $8 per mensem]. Nothing further is payable until that advance has been worked off.

Dyeing.—[Silk-weaving and silk-dyeing constitute a single trade. General dyers are not intrusted by silk-weavers with thread-silk for dyeing.] Weaving is to be taught first, and then dyeing. A theatrical performance is the penalty for disregard of this rule. No shop shall have more than one apprentice at dyeing at the same time.

Masters.—A workman who enters into manufacturing, and taking as partner a man out of the trade, shall make the contract for five years, during which period the partnership shall not be dissolved. A play and banquet is the penalty of contravening this law. At the expiration of five years, the parties may follow their own inclinations in the matter.

When a new shop is opened the proprietor shall subscribe 3,000 cash for temple purposes.

Manufacturers shall have but one member of their family learning the art at one time.

A shop of three looms may have two apprentices—not more.

No workman shall secretly avail of the assistance at work of any one not in the trade, nor privately teach any the art.

Quarrels among members are to be settled by arbitration. In a small matter the one in fault is to be fined in candles [for use in the temple worship], and for graver offenses the fines shall be a concert [vocal and instrumental music by five boys before the gods], but feasts shall not be imposed as a fine in quarrels. Fining an offender for quarreling to the expense of a banquet is not always conducive to harmony, as this union discovered.

The present advanced rate of pay shall suffer no abatement; any workman accepting less shall be punished.

Silk-weavers' apprentices.—An apprentice must begin by standing treat, giving a feast to workmen of the establishment. Two years are to be spent in learning to weave and three years' service as a weaver are to be rendered to the master, five years completing his apprenticeship; employers violating in this respect to be fined. When out of his time the apprentice shall serve his late master for two years as a journeyman, when he is at liberty to work elsewhere. A manufacturer who endeavors to get him away shall be fined a play, and the late apprentice compelled to fulfill the year's contract. If, however, his old master does not want to retain him, or if he wishes to manufacture on his own account, he is free to go. An appren-

tice wishing to discontinue learning the trade may leave, but he shall not be permitted to resume it.

Apprentices are required to be respectful to journeymen. At the close of his time an apprentice shall subscribe 1,500 coppers to the union for temple expenses.

WÊNCHOW MILLERS.

Flour mills at Wênchow are worked by hand. The millers of Wênchow state in their preamble that former regulations having fallen into confusion, each miller charging what he thought fit, thus bringing on damaging competition, they had now come to an agreement for the better governing of the craft. Sixteen mill proprietors constitute the union, which is under the control of a committee of four, changed every year so as to bring in rotation each member into office. It is the duty of the committee to confer at the close of each month with the trade and to fix the price of flour for the month ensuing. Any member who sells flour at less than the price agreed upon to be fined the cost of a play and a feast. No member is allowed to sell flour on credit to any person who is in debt to another member; that is, customers are not allowed to run up accounts with several establishments. No member to grind wheat except what he has himself purchased—not to grind another man's grain. The millers' union steelyards to be the standard for measuring. No abatement to be made in prices in favor of pastrymen and others who are large consumers of flour. Usual penalties for infractions. Assessments for the expenses of the union and other minor matters follow, concluding with the injunction: "Let not observance of these rules be a mere spurt at the outset and dawdling afterwards."

WÊNCHOW POSTAL COMPANIES.

Imperial posts exist exclusively for conveying official dispatches. The private correspondence of the country is carried by postal firms. These combine for the protection of their common interests and for maintaining a uniform tariff. At Wênchow above a dozen firms engaged in conveying letters agreed on a tariff with this preamble: "Our undertaking of sending letters containing dollars or notes admits no delay or error in delivery; besides, we are required to make all losses good, and while the responsibility is great the recompense is small. Moreover, the rules that existed among us prior to the commencement of steam communication became obsolete, and as the business increased offices were multiplied; all which render necessary the adoption of new rules and tariff on the basis of postal offices at Ningpo and Shanghai." To give some of the charges: 70 coppers to Ningpo; Shanghai and Canton, 100; Peking and Hankow, 200. Where much of the route is by land the charge is higher; for example, when water communication with Peking ceases, postage is double. Accepting less postage than the union has agreed upon subjects the offender to a fine of a play, feast, and a lot of candles for illuminating idol shrines.

WÊNCHOW BARBERS' UNION.

The humblest of the guilds (players excepted) is the barbers', which I here name, in that the association of this most needful class of artisans illustrates the utility of organization and combination as an elevating agency; their union having improved them socially by infusing into their body a degree of self-respect to which erst they had been strangers. On combining they discovered that they had wrongs to be redressed and rights to be vindicated, which in itself was salutary. Custom, as strong as the statutes of the Empire, interdicted their attendance at the literary examinations. It was regarded as sublimely audacious in barbers to demand such a privilege; its absurdity strained the risible faculty of the polite, appalled the learned, and agitated society generally. Local magistrates of every grade exclaimed "*non possumus.*" They boldly carried their appeal to the provincial capital. Yamên after yamên was closed to their admittance. Happily, the governor was liberally minded and penned a dispatch in which he showed that barbers were not included among players, lictors, &c., who, with their descendants to the third generation, are not allowed to attend the examinations. Having thus manfully disenthralled themselves, they erected a hall for plays and religious worship, in which they placed a mural inscription that, in modest language, narrated their grand achievement. Subsequently the union decided on a measure which was still further designed to advance the status of their profession. Shampooing, an operation that consists in pommeling the spine between the shoulders of customers who have been shaved and who pay an additional fee for the prescription, they voted to be a menial act unbecoming tonsorial dignity. Like trades-unions in China generally, and like too many similar bodies in the West, this association, not content with having offered successful resistance to injustice, proceeded to arbitrary acts of oppression towards its members; one

who violated a rule of the union that forbids ear cleaning during the last six days of the year (those being days when every man has his head polled, and there is no time to be devoted to ears), and another who shampooed a customer were mobbed by their fellow shavers, and their tools, furniture, and paraphernalia thrown outdoors, street arabs coming into immediate possession of the articles ejected.

GENERAL REMARKS ON TRADES UNIONS.

Hours of labor—Holidays.—Unions whose craftsmen are paid by the amount of work performed are not allowed to labor beyond certain specified hours. Weaving, for example, is not allowed after 9 o'clock at night. There are no laws respecting the hours of labor of those who work by the day; custom adjusts that. Carpenters work eleven hours in summer and nine hours in winter; masons half an hour longer. Chinese artisans are a reasonable class of men, and never think of demanding uniform wages for inferior and superior mechanics; and employers being amenable to reason, laws do not favor aggression on the part of the wage-paying class; consequently there are few collisions between capital and labor.

Perhaps Wênchow tailors may be taken as an illustration; an average workman will receive $5 per mensem and his food, a wage that enables him to maintain a family with the necessaries of life.

It is the unhappy lot of the Chinese proletariat to toil in a Sabbathless land, in which the holidays that are allotted to him are poor compensation; the last five days of the year, the first ten days of the new, and four other interspersed through the year are his only exemptions from labor; yet is he not only contented but cheerful.

Apprentices.—Many of the unions rigidly restrict the number of apprentices of the master. Some, as goldbeaters at Wênchow, allow none but sons and nephews of workmen or masters to leave the trade. The unutterable meanness that moves pseudo-civilized men in the West to debar women from occupations for which they are competent is, as might be expected, rampant in China. Rules of certain unions (*e. g.*, silk weavers) expressly forbid their members teaching or employing women; needle makers make exceptions in favor of the wives and daughters of members of that craft, who are allowed to acquire the difficult art of drilling needle eyes, the instrument employed being identical with the ingenious "pump drill" used by North American Indians; but should either ever marry out of the union, employment would be withheld. Apprentices serve in some trades for three and in others for five years. At times, a premium is demanded; in all, food and lodging are alone provided, clothes being found by parents. No master can employ an apprentice who has not served out his full time. Before becoming a journeyman he must stand treat for a theatrical performance. In some trades fees are required for the general purposes of the union from apprentices commencing and concluding their period of service.

General penalties.—A play, three tables of viands, and liquor.

A Wênchow capitalist who sets up a gold-beating establishment may take a son or nephew as apprentice. Tin-foil beaters have similar rules, and so rigid are the rules that infractions are unknown.

Rules for preserving the honor of unions.—In some unions restrictions are imposed on its members by the union respecting the quality of work to be turned out. The Kittysols Union* states in its regulations that the trade had suffered depression from deterioration of paper umbrellas that had been put upon the market, and their export having consequently fallen off, it was agreed that kittysols should henceforth be of a uniform quality and fixed price. Dealers now who put on the market defective articles are mulcted to the same extent as if guilty of disposing of wares at less than the established tariff of the trade. It appears from by-laws of the Pewterers' Association that their trade suffered from a like cause, and new rules were adopted, to which all are compelled to conform. Any pewterer who alloys a tin article with lead is amerced by the trade as surely as if he sold articles for less than his fellow craftsmen. In this attempt to elevate the character of their calling they are public benefactors.

Very excellent are the regulations of the dyers' trade union, whose preamble declares that "Business requires for its proper administration that there should be equitable rules and good faith in their observance; and that owing to the fluctuating price in indigo, it is to the interest of all concerned that charges for dyeing should be fixed twice a year; that during the semestral period the tariff should undergo no

* Umbrella makers in China do not assign the origin of their craft, as do their Western *confrères*, to the last century; but (somewhat vaguely) to high antiquity. An archæologist of the eleventh century A. D. says umbrellas were in use during the period of the Three Dynasties (they date from the twenty-third century B. C.). Umbrellas were then of silk, and came into use after canopies. Silk umbrellas gave way in the latter part of the fourth century A. D. to those made of paper—the kittysols now in use.

change whatever. It is also provided by that craft that accounts shall be settled at each of the three periods into which the year is divided; which means not only that master dyers shall owe no man, but that all moneys due him shall be collected—long accounts being inimical to the common interests of the craft.

Strikes.—Strikes are infrequent, and not illegal. There does not appear to have been a time in industrial history when laborers might not lawfully combine to raise wages and regulate the hours of work; and no harm has resulted from that liberty; for the code, in interdicting "monopolizing markets," is calculated to prevent abuses of that liberty; but a strike for increase of wages on the part of workmen in the public service is severely dealt with as mutinous. Several cases of that description occurred on the Grand Canal in 1826-'39; boatmen of junks that were conveying imperial rice having been beaten and banished for clamorously demanding higher pay (刑案匯覽 *Hsing-an-hui-lan*). Resistance to *corvée* may be classed among strikes. I once witnessed resistance on the part of a cooper to an unjust demand. I saw the poor fellow at the gate of a magistrate's yamên, just after he had, with a cleaver, held in his right hand, severed his left at the wrist, rather than perform the half-gratuitous labor that was required of him.

A strike of journeymen for increase of wages rarely fails to be successful, for if it goes so far as to endanger public tranquility, magistrates interpose, and the strikers being too numerous to be flogged and too poor to pay for the mulcting operation, hands are laid on the masters, who can always be had when fleecing is feasible; and they, to avoid such result of a strike, wisely surrender; a state of things, however, of which workmen take no unfair advantage.

Sectionalism.—Clannishness is a Chinese characteristic, which renders sectionalism a common fault. Many occupations form unions, membership of which is restricted to fellow townsmen. Fish-hook making at Wênchow is restricted to men of that trade who belong to Fukien, and no Wênchowese is allowed to acquire the art. Needle-makers' rules allow only Taichow and Kiangsu needle makers to work at Wênchow (those workmen excelling in the craft). Tallow-chandlers and tin-foil beaters are remarkable for sectional jealousy. Those craftsmen will not work with men of their trade who happen to belong to another prefecture; as it is, though laboring in different establishments, they indulge in frequent and fierce feuds. At Wênchow, gold beating is monopolized by artisans of that craft from Ningpo: their trade union forbids instruction in gold beating to Wênchowese. Should an employer transgress that rule, it is decreed that journeymen shall meet to enforce the penalty which their law inflicts on such offenders. The mercantile guild at Wênchow excludes forever those from a region in their prefecture, because when it was instituted, eighty years ago, men from that place declined to take part in its organization.

"*Boycotting.*"—None of the by-laws of trades that have been published, nor those of chambers of commerce, expressly provide for "boycotting" others than members of their own combination, yet in practice it is carried out thoroughly to the extent of their ability; nor is membership always obligatory, and is often treated as a privilege: yet in point of fact no one in their line of business can with impunity refuse to act with them. Recently a merchant at Hankow invested in drugs to sell at his private residence, but the associated druggists caused him to be summoned to the magistrate, and to pay $500 for a license, and to join the guild. Non-compliance with the rules entails utter and irremediable ruin.

TRADE-UNION TRUCULENCY.

As regards handicraft associations, their unions are most exacting and arbitrary; no recalcitrant members can escape punishment, nor can any obtain employment who are not in good standing for fidelity to the craft. Ordinarily, mild measures are resorted to; the offending member is waited on and invited to repair to a tea house. Resistance would be useless. He goes, and is there under arrest, surrounded by successive relays of fellow craftsmen, until he pays the amount for which he is mulcted, or until friends or employers advance money to satisfy the demand. It is rare, indeed, that such measures fail, and occasions seldom exist for inflicting cruelties like those of which Western mechanics have been guilty.

Although an exceptionally mild people, there are no limits when their blood is up. In all the Empire there is perhaps no population so docile, so law-abiding, as that of Soochow, the Athens of China; nevertheless, that city was not long ago the scene of a ferocious and ghastly proceeding on the part of the gold-beaters' union. A recent writer gives the narrative, which differs but little from the account current at the time in Shanghai. A novel which gives a fictitious account of the traitor Yo Fi having been bitten to death by an indignant populace has given rise to the belief in Chêkiang that persons conspiring, and conjointly, in putting a man to death, escape

punishment because the crime of murder cannot be brought home to any one of the perpetrators, and at this time (1872) prevailed the more, from the fact that men then living could tell of a magistrate in the northern part of Kiangsu who suffered that awful death for withholding food in a famine, and it was believed (erroneously no doubt) that none of the conspirators were executed.

Gold leaf was needed to an unusual amount for the Emperor. One of the craft represented to the magistrate that if he were allowed to take a number of apprentices the work would be greatly expedited, and having obtained permission, he proceeded to engage a great many apprentices. The "scoundrel," as our author styles him, violated in a flagrant manner a law of the trade which disallowed an employer to take more than one apprentice at a time. His conduct infuriated the craft, and the word passed round "Biting to death is not a capital offense." One hundred and twenty-three of them rushed on the miserable man, each taking a bite. Death soon relieved the victim of fiendish rancor. To make sure that none shirked duty on that occasion, no one was allowed to quit the shop whose bloody lips and gums did not attest to his fidelity. The murderer who took the first bite was discovered and beheaded.*

Trades unions are essentially anti-free-trade institutions. To some free trade means utter extinction, and naturally they are impatient to avert that result, succeeding only in driving the industry elsewhere—*e. g.*, combinations of associated labor at Canton are causing the transfer of mechanic arts to Hong-Kong, illustrations of which are furnished by the papers of that colony. Native merchants imported from Birmingham a quantity of thin sheet brass for manufacturers of brass utensils at Fatshan, throwing out of employment a class of coppersmiths whose business consisted in hammering out the sheets heretofore imported in a thick form; but the trade struck to a man, would have none of the unclean thing, and to prevent a riot among the rowdiest class of the rowdiest city in the Empire, the offending metal was returned to Hong-Kong. Further, a Chinese from America the other day imported thence some powerful sewing machines for sewing the felt soles of Chinese shoes to the uppers, but the native sons of St. Crispin destroyed the machines, preferring to go on as their fathers did, while the enterprising Chinaman returned to Hong-Kong a poorer and sadder man. Again, some years ago a progressive Chinaman set up a steam-power cotton mill, only to be made useless by the very simple plan of the growers refusing to send in a pound of cotton. Filatures from France, effecting not only a wonderful saving in time and money, but improving the quantity and quality of the output of silk, succeeded at Canton for a while, and were introduced latterly by Chinese capitalists into the silk-rearing districts, only to be destroyed and wrecked by the country folk.

GUILD PENALTIES.

It will be observed that guilds of every class have for sanctions against infringement of their rules fines to be paid by bearing the expense of Thespian entertainments and banquets. As this is a peculiar characteristic of China's social life, it merits a word of explanation. Confucius refers to an ancient custom which compelled archers who missed the target to take wine; and we learn that on the conclusion of hostilities between two contending states, a feast was provided by the loser for the diplomatic representatives of the winner on the occasion of the conclusion of treaties of peace. Convivialities of the table, or mat rather (for it was only in times comparatively recent that Chinamen "sat with legs hanging down," that is, used tables and chairs), have always been employed by them as means for accomplishing public ends. In the feasts annually given by the mandarinate for meritorious aged men, the sage recognized the ceremony as affording a lesson in government by illustrating deference due to seniority; and it taught the duty of subordination to rank.

It is not unlikely that the blending of conviviality and punishment was a device of men of yore. This ingenious mode of mitigating sanctions, rendering them conducive to urbanity and harmony, is certainly no modern invention. Not only are festival penalties inflicted on derelict and refractory members of guilds and trades unions, but on offenders generally. When quarrels arise, umpires intervene or are called in, who condemn the aggressor to go to the expense of a play and a dinner; the feast taking place in a gallery affording a view of the stage and play (the guests being the arbitrators, the two litigants, and select friends), while the court is free to the public. Although those compulsory entertainments and feasts involve a certain degree of discredit to the host, yet he has the satisfaction as host of being

* The magistrate of Ching-pu, near Shanghai, had his ears bitten off, bit by bit, in 1852, by enraged villagers because of his extortions in the matter of land tax.

treated with decorous politeness, a thing so dear to this ceremonious people. Philosophers cannot but admire this form of social jurisprudence, which is more likely to be commended than generally imitated by Westerns.

CO-OPERATIVE LOAN CLUBS,

Or ready-money associations, although not comprehended in the term guild, merit a paragraph to illustrate yet further the "clubable" character of the Chinese. Every Chinaman, almost every Chinawoman, belongs to or has belonged to one or more associations, exclusive of the secret societies by which the Empire is honeycombed, yet there are no mutual aid societies for sickness. Charity finds expression by certain benevolent services of compatriot guilds, and by eleemosynary societies, but for temporary loans to the impecunious there are associations of a description entirely unique. A man in immediate need, say, of $50, induces nine friends to unite with him in forming a ready-money club, each subscribing $5, which with his own share meet his necessity. He has the use of the common fund for one month, when the members meet and decide, commonly by throwing dice, who next comes into possession of the money. In that manner each member in turn has the use of the fund, when it is either returned or the arrangement renewed. The sum subscribed varies in amount from less than half a dollar to hundreds; and the periods of use of money vary from less than a month to a year or more. Sometimes interest is paid in the following manner: the first of $50 receives but $49, each member deducting a dime for interest; the borrower for the second month receives $49.10, and so on to the last. Failure of payment from any cause is sure to be made good by the borrower's family. Great varieties exist in the constitution and working of these clubs. M. Simon gives details respecting seven money clubs.

REFLECTIONS.

I have been unable to discover that trade unionism in China has been on the whole inimical to the public weal, while its utility is obvious from several aspects.

I.—Combinations of employers against society, by fixing a uniform value on the products of manual labor, neutralize the tendency which unrestricted competition has to reduce the proletariat to abject dependence. Necessity is not laid on masters to extort a maximum of wages, while combinations of workmen check the sordidity of masters. It is probable that what society might profit by unrestricted competition it would lose by impoverishment and degradation of its humblest members, who sometimes are the fittest to survive in the struggle for existence.

II.—Obvious moral advantages accrue from the affiliation of workmen for the promotion of legal objects. Self-respect and self-restraint are cultivated, which is shown by the result of a combination of Wênchow barbers. Nor is the establishment of an unalterable scale of wages for numerous articles for sale in shops, which generally justifies what is often inscribed on signboards—"Only one price"—a trifling result of combination, saving as it does much mean cheapening on one side of the counter and brazen mendacity on the other.

III.—We have seen certain trades mutually binding each other under penalties to turn out faultless work; the result is that all the commodities found in shops of those particular wares are always of standard quality and uniform price.

IV.—We have seen also that these institutions are prone to resort to tyrannous proceeding, and are capable of committing atrocious crimes; but where the administrators of the law are honest and intrepid, those evils are measurably restrained—public opinion also exercising wholesome restraints, both as regards workmen and employers.

GENERAL CONCLUSION.

In the foregoing survey of Chinese mercantile and industrial life, the most notable feature observable is their capacity for combining, which is one of the chief characteristics of civilized men. To them organization and combined action is facile because of their inherited reverence for authority and law-abiding instincts. Their docility is not that of a broken-spirited, emasculated people, but results from habits of self-control, and from being left to self-government in local, communal, or municipal matters; and as regards the state, they learn self-reliance. Were a colony of the poorest and least cultured of these people placed by themselves on an island, they would as soon organize themselves into a body politic as men of the same station in life who had been tutored in rational democracy.

SUPPLEMENTARY NOTES.

AGRICULTURAL LABORERS.

What has been said above relates to a limited portion of the toiling multitude—to those who are competent to organize for the common protection. It will not be considered wholly irrelevant to the subject under discussion if I add a few paragraphs respecting the masses who form the substratum of the proletariat—the field hands into whose minds the thought of combination never penetrates.

The subject well merits a separate treatise, instead of a page or two, for its elucidation. It has been proposed to the British Parliament to institute inquiries in every civilized country to obtain information respecting wages, for purposes of comparison. The following facts respecting this part of China are consequently in order. But first I must remark that, without a uniform standard of comparison, statistical tables of compensation for labor can be of little practical use; such a labor gauge I suggest for general adoption.

Let a scale be graduated by years from eighteen upward for indicating the age which a field laborer must attain when by his own labor he can purchase enough of the soil that he cultivates to afford him a maintenance; and then the number of years further required to acquire as much additional land as shall support him as a married man. Let it be considered that a short period in which that condition is attainable denotes prosperity, and a protracted period a condition of the state which is adverse to its best interests. Gauged in this manner, it will be found that China occupies no mean position among civilized states.

Six parts of the rice region of Wênchow are owned by non-cultivators, and four parts are tilled by owners of the soil. Tenant farmers pay landlords one-half of the rice crop—one acre yielding over 19 piculs, giving to each about $21, the owner paying the land tax, $1.80—every other expense being paid by the farmer, to whom, however, the intervening crops all belong, which are worth $15; consequently his share of the product of the farm is $39. The proprietor, after deducting expenses, receives something less than 5 per cent. interest on his investment. Coming now to the field hand whom the farmer hires, we arrive at the substratum of labor. The average wages of an able-bodied young man is $12 per annum, food, straw shoes, and free shaving. Deducting $4 for his clothing, he saves $8 annually—or may do so. Ten years' savings will enable him to buy one-third of an acre of land (value per acre $150) and necessary implements, by which he can attain by his own labor a subsistence. In twenty years he can become possessor of two-thirds of an acre and one-third of a buffalo, and with six years more saving he may purchase a wife, with whose assistance he can maintain himself on his own land, in his own hut, and rear children. Thus, in twenty-six years from zero, a Chinese farm laborer may obtain what to him is a competence. Ascertain now the number of years in which the same result might be accomplished in all lands, and we shall have, approximately, their relative wage rate. This labor gauge cannot, of course, embrace the important factors of decency and comfort in living, nor the death rate, which with other matters pertain to a full consideration of the subject. The relations between agricultural laborers and between landlord and tenant give rise to no ill will; all are satisfied by arrangements developed in long bygone ages. Few are so poor as not to become possessors of soil. So minutely is land frequently divided, holdings being as small at times as a sixth of an acre, or less—owned, it may be, by a widow, or a coolie, and let out to the cultivator of adjacent fields for half the yield of rice.

AGRARIANISM.

Having referred to the size of farms, I may be allowed to digress further, and add a few remarks respecting attempts that have been made to prevent the accumulation of land by capitalists. A modern writer cites a passage from the Analects, in which Confucius says: "In equal [allotments of land, such as existed in ages not long antecedent to his own] there were no poor," a construction which I am told is sustained by certain commentators. That there were in those early days restrictions on the transfer of land which prevented it from being wholly monopolized by the wealthy there is no want of evidence.

"Since the Han and Yang eras, the subject of limited and equal possession of land has been under consideration." On referring to the early Han history, we find the instance to which he probably refers. Ai Ti, B.C. 6, in accordance with the counsels of his ministers, K'ung Kuang and Shi Tan, issued an edict limiting the amount of land to an individual to 50 acres, and allowing three years for the subdivisions to be effected. After that period, the land of any whose average exceeded that amount

was to be escheated, and the offender punished. Land thereon became cheap, but before the period expired those ministers were displaced by Tung Hsien (the Emperor's catamite) and another creature of the same stamp, who reversed the plan of their predecessors, and that endeavor to prevent monopoly in land was frustrated.

Again an attempt of the same nature was made; this time by the usurper Wang Wang, A. D. 9-22, who, as a part of his policy to restore the customs of the early Chow and preceding dynasties, enacted that the limit of land which an individual might hold to be something less than 17 acres, the excess to be divided among his clan or neighbors, without compensation, and that limited amount of land not to be alienable or to be transmitted to heirs.

Death was the penalty which was affixed to violations of the edict. Three years later the attempt to prevent pauperism and to promote contentment had to be abandoned; offenders against the law had become so numerous that the sanction could not be enforced, and people were again allowed to buy and sell and bequeath land without restrictions as before. Land laws which were adapted to an early stage of civilization were not conducive to promote the common weal at the comparatively advanced stage which society had then attained.

An emperor of the Northern Wei dynasty, Hsiao Wen Ti, A. D. 471-79, was moved to compassionate the condition of his subjects whom violent and wealthy men had dispossessed of their land, which he proceeded to restore to them, allotting to every man about 7 acres of arable soil, and the same amount to each woman, imposing only certain salutary conditions—to wit, within three years each allotment should be found to have 1,900 mulberry, 100 jujube, and 60 elm trees, when those portions of the lands which contained trees were to become entirely the property of the cultivator, while the treeless rice fields were to revert at the cultivator's death to the state. and punishments were inflicted on idle or dissipated cultivators. There seems to have been good grounds for dispossessing landlords of territory on that occasion, and it is likely that for several years uniformity of the acreage of farms was maintained.

I have no work of the Tang period to search for verification of our author's statement that the subject was considered at that era.

Subsequently, however, an account is given in the general history of an endeavor that was made in that direction, which was attended with disastrous results. It was the work of Wang An-shih, an erudite scholar, an accomplished writer, whose poetry is still admired, and who was the originator of the style of composition which rules at the literary examinations; who, moreover, was a man of suave address, of winning manners, and persuasive eloquence; upright and benevolent withal, but lacking one endowment—in which, unfortunately for his own fame and the welfare of the state, he vainly supposed himself to possess in an eminent degree—statesmanship; yet he aspired to the premiership. Confiding in the rectitude of his motives, he was opinionated, and would brook no interference. Plenary power was accorded to him by Chi Tsung, A. D. 1068-86, for carrying out his schemes for regenerating political society, the chief of which was to advance Government money to farmers at 2 per cent. interest, with the design of stimulating agriculture and increasing the revenue. The treasury was emptied for that purpose, but the channel through which the money was to be conveyed to the plowmen absorbed it all on the passage—that is to say, the officials stole it, which, with other abuses connected with the measure, caused distress to men of means and impoverishment of the people.

Under the next reign a capable and practicable minister came into power, who reversed the revolutionary plans of Wang. From that time to the subversion of the dynasty by the Mongols the country had scant repose.*

Agrarianism was not a part of Wang's plan, but the renationalization of land still had advocates, one of whom, Chi Shun-tao, premier of Li Tsung, in 1260, an avaricious, unprincipled minister, aimed to enrich the Emperor and himself by despoiling landowners.

It was decreed that all officers who possessed more than 17 acres of land should sell the excess to the Emperor. Six departments in Chêkiang and Kiangsu alone yielded about 600,000 acres, which, however, was not all derived from the mandarinate, but officers everywhere compelled private landowners to submit to the spoliation. The measure met with so much resistance that in the next reign the unpopular minister was shelved, and natural laws ceased to suffer legal infringement.

On his succession to the throne in 1736, Chien Lung was memorialized in relation to the renationalization of land by Ku Tsung, who prayed that 150 acres should be decreed as the maximum of land that an individual should be allowed to possess,

* Wang's enrollment of all the people as militia was also a failure, but some of its provisions still exist. In the early part of his career this reformer was magistrate of Ningp, where a temple to his worship, erected by farmers, is still maintained. For further information, *vide* Mayers' "Manual," p. 245.

and that, by way of experiment, the change should be first introduced into the department of Huian. Chien Lung in reply showed the fallacy of the memorial and its impracticability—it would not lessen the number of large landowners, seeing that the prohibition could be easily evaded by nominally distributing the excess of land among brothers and sons, and it could prove of no use to the landless; so far from the proposed change being of public advantage, it could not fail to be pernicious; yet, as the memorialist had named Huian as a fit department in which to make the experiment, he, the Emperor, had consulted the governor-general of Kiangsu on the question, whose views on the infeasibility of the scheme were the same, as, in fact, were those of everybody. "Let the subject be dismissed from further consideration."

By the time that the contract social was excogitated, philanthropic political economists in China had abandoned hope of meliorating the condition of the industrial classes by legislative infringements of natural social laws; experience had convinced them that such interference entails greater evils than those which it is proposed to redress. While the land is regarded as imperial—that is, national—property, it has become to all intents private, and absolute proprietary rights are fully conceded;* but as primogeniture and entail are unknown (serfage nor villenage ever shackled the Chinese), and there being no institutions which specially favor the accumulation of land, the monopoly of soil by capitalists is not so extensive or general as to give rise to popular discontent. The *métayer* system which prevails is equitable, and small holdings by peasants being common, and land being within reach of such a large portion of the population, neither agrarianism, socialism, nor communism is likely to agitate the political atmosphere of the middle empire.

CONTENTMENT OF THE PROLETARIAT OF CHINA.

To the sociological student there are few aspects of greater interest than the contentment that he observes among the teeming millions who in China press so closely on the means of subsistence. Civil wars, it is true, have been numerous, and insurrections are of constant occurrence, but such risings are directed only against maladministration; they are never revolutionary.

How has it come to pass that such a dense proletariat should through so many ages contentedly accept their situation? No standing army is required to compel submission to the laws! Manhood has not been crushed out of them by despotism! What, then, is the explanation? It is the result of a legitimately begotten conservatism—a conservatism whose sire was radicalism; that is to say, when, more than a score of centuries ago, feudalism and hereditary rule were abolished, there was a radical revolution (China's sole revolution), which opened the way to rank and power of every qualified man. By that sweeping change the Chinese became in the course of time a leal-hearted, conservative people. It was then that the foundation of China's growth and greatness were laid; the corner-stone being equality before the law. No institution or caste bars the way of the ambitious to take part in the government of the Empire. No rancorous feelings are fostered against the affluent and powerful by the poor; the disparity excites no hostility; like the student who fails to mount the first degree towards official distinction, he accepts the situation as a decree of Heaven, and bears no grudge against the successful in life's race. The laborer can descry no brand on his son's brow indicative of inferiority and exclusion from positions to which the sons of the great aspire. The air of the examination hall is as free as the air of Heaven, and there, in competition, laborers and rich men's sons are on an equality. Herein lies the secret of the success of Chinese administration, the explanation of the contentment of half-starved artisans and laborers; a system that has stood the test of ages, which is a sure prophylactic against the gravest ills that states are heir to, and which merits the most serious study of cultivators of the science of government.

*When regions have been depopulated by civil wars the Governments have restocked them as soon as possible with colonists, as was recently the case after the devastations of the Taiping rebellion; the land thus allotted becoming salable and bequeathable under such conditions, population increases in geometrical proportions until it overtakes the means of subsistence, when it becomes stationary, which has long been the case at Wênchow, where centuries of quiet have been enjoyed; the number of inhabitants to a square mile rivaling that of Belgium. Natural causes came into operation (here aided by female infanticide), which maintains a balance between the capacity of the soil and birth and death rate.

AUSTRALASIAN GOLD MINING.

REPORT BY CONSUL GRIFFIN, OF SYDNEY.

The total yield of the gold mines of Australasia for the year 1886 is estimated at 1,365,981 ounces, valued at $25,883,884, against 1,443,960 ounces, valued at $27,361,603, for the year 1885. With one or two slight exceptions the yield has steadily declined in every one of the colonies for the last ten or twelve years. The output of Victoria for 1886 was smaller than that of any previous year since the discovery of gold in that colony. The yield was 70,112 ounces less than that of 1885, and nearly 300,000 ounces less than that of 1876. The yield in New Zealand for 1886 was 10,272 ounces less than that of 1885, and 90,288 ounces less than that of 1876. The product in New South Wales declined from 100,699 ounces in 1885 to 98,446 ounces in 1886; South Australia, however, increased her yield from 18,327 ounces in 1885 to 21,115 ounces in 1886. There has also been a slight increase in Queensland, say from 308,348 ounces in 1885 to 310,111 ounces in 1886. The total yield in Australasia since the opening of the mines in 1851 to the present time is estimated at 80,808,981 ounces, valued at $1,582,500,000. This is an enormous yield, but it is not as large as that of the United States by $146,000,000. The truth is, the United States produce one-third of all the gold in the world, and more than one-half of the silver.

During the last four years the value of the world's annual product of gold has been about $100,000,000; the United States taking the first rank, Australasia the second, and Russia the third.

The subjoined table shows the quantity of gold produced in the Australasian colonies for each year since 1876.

Table showing quantity of gold produced in Australasia from 1876 *to* 1886, *inclusive.*

Year.	New South Wales.	New Zealand.	Queensland.	South Australia.	Tasmania.	Victoria.
	Ounces.	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*
1876	155,156	317,365	314,776	9,858	11,107	963,760
1877	122,629	371,685	358,266	11,811	5,777	909,653
1878	117,978	310,486	283,592	10,746	25,240	775,272
1879	107,640	284,100	261,552	14,251	60,155	758,947
1880	116,751	303,315	228,120	13,246	52,595	829,121
1881	145,532	250,033	259,783	16,970	56,698	858,856
1882	129,322	230,803	230,090	15,668	49,123	898,536
1883	122,257	222,890	193,994	15,988	46,577	810,147
1884	105,983	246,392	261,824	21,445	42,340	768,618
1885	100,667	237,371	308,340	18,327	41,241	735,218
1886	98,446	227,079	310,111	21,115	41,361	665,196

It will be seen from this table that Victoria surpasses all the other colonies in the production of the precious metal, and that New Zealand, which was next in rank, had to yield her position to Queensland in 1884, when the production of the latter colony amounted to 261,824 ounces, against 246,392 ounces for New Zealand.

DISCOVERY OF GOLD.

Although gold was known to exist in various parts of Australia as early as 1823, it was not found in workable quantities until 1851, about three years after the discovery of gold in California.

As far back as 1787 it was reported that gold had been found in Australia by the convicts who had been transported here by the British Government, and although little faith was placed in the report at that time, it is now believed that gold was actually discovered by them, and that the authorities refused to encourage a further search for the metal, lest it might interfere with the proper discipline and government of the criminal classes.

In 1839 Count Stirclecki found auriferous pyrites in the Wellington district, New South Wales, but was unable to prevail upon the governor to issue a proclamation announcing the discovery. In 1841 the Rev. W. B. Clark found gold "*in situ*" in the granite formations of the "Vale of Clywd." Sir Roderick Murchison in 1844 stated in the Journal of the Royal Geographical Society, that there were gold-bearing rocks in Eastern Australia, similar to those in the Ural Mountains. In 1848 Mr. F. W. Smith, of Sydney, found gold and offered to reveal the locality to the Government upon the payment of £250 ($1,216). The governor of the colony, although not accepting the offer, stated that if Mr. Smith would rely upon the liberality of the Government, it would see that his reward was in proportion to the value of his discovery. In February, 1851, Mr. E. H. Hargreaves, who had recently returned from California, as he stated, expressly for the purpose of searching for gold, succeeded in finding that metal at Summer Hill and other places in New South Wales. Mr. Hargreaves at once revealed the locations to the Government, and was handsomely rewarded for his services. In the same year gold was found in payable quantities at Clunes, Ballarat, Mount Alexander, and other places in Victoria.

The select committee of the legislative council of that colony, appointed for considering the claims to rewards for gold discoveries, reported that the Hon. W. Campbell found gold in March, 1850, but concealed the fact until July 6, 1851, the date upon which gold was found in the same colony by a Californian miner, Mr. James Esmond. About the same time the famous gold fields of Ballarat were discovered. Thousands of people from all parts of the world now flocked to the Victoria mines, and to illustrate the effect of the discovery of the precious metal upon the population, I will mention that Victoria increased the number of inhabitants from 55,000 to 260,000 within a period of only fourteen months.

AUSTRALIAN NUGGETS.

The first large nugget found in Australia was called the "Brenner Nugget" and weighed 364 ounces, but this was shortly afterwards eclipsed by the discovery of the famous "One Hundred Weight" nugget at Bathurst. This nugget consisted of three pieces, each of which weighed about 60 pounds. The total yield of the pieces was 160 pounds of Troy gold, or 1,272 ounces. In 1858 another large nugget, weighing 1,182 ounces and 7 dwt., was found near Burradong, New South Wales. It assayed 87.40 per cent. and was valued at £4,389 8*s* 10*d*. To the colony of Victoria belongs the credit of having produced the largest nugget ever found. It was called the "Welcome Nugget," and weighed 2,217 ounces 16 dwts., valued at £10,500. Mr. J. H. Maiden, curator of the Technological museum at Sydney, has prepared a descriptive list of Australian nuggets, ranging in size from a few ounces to several hundredweight. The following are included in the list: "The Welcome Nugget," found at Ballarat,

Victoria, 1858 weight 2,217 ounces 16 dwt; the "Viscount Canterbury Nugget," found at John's paddock, Berlin, Victoria, 31st May, 1870, at a depth of 15 feet, weight 1,105 ounces; "the Precious Nugget," found in Catto's paddock, Berlin, Victoria, 6th January, 1871; "the Kumton Nugget, Catto's paddock, Berlin, Victoria, 17th April, 1871, weight 7,018 ounces; "the Schlem Nugget," at Dunolly, Victoria, 11th July, 1872, weight 538 ounces.

DEVELOPMENT OF THE MINES.

The greater part of the gold obtained in the Australasian colonies is from quartz mining. In Victoria the proportion obtained from that source is nearly two-thirds more than from alluvial mining. That colony in 1885 produced 453,400 ounces from quartz reefs and 281,818 ounces from alluvial deposits. These figures show a decline of 17,685 ounces from quartz reefs and 25,715 ounces from alluvial workings from those of the previous year. Mr. Hayter the Government statist of Victoria, states that in proportion to the number of mines engaged in quartz and alluvial mining the yield of gold from the former is frequently more than twice as large as that from the latter. It should be remembered, however, that only one-fifth of the steam-mining machinery of the colony is employed for alluvial workings, the remaining four-fifths being used for quartz reefs.

Quartz mining in New South Wales is not as profitable as in other parts of Australasia. Indeed, with the exception of a few localities, the veins in New South Wales have not been worked to any great depth. The mining heretofore carried on has been principally confined to the workings of river beds and shallow alluvial claims. The poor success which has often attended the workings of quartz veins is attributed principally to inexperience and to the absence of the right kind of ore separators and other mining appliances. The deepest gold mine in New South Wales is at Adelong, 273 miles southwest of Sydney, and is not more than 900 feet in depth. The reef is about 18 inches wide and yields about 2 ounces per ton. In Victoria there is a mine 2,409 feet deep, and some fifteen or twenty others are worked at a depth of over 1,700 feet.

The following is a list of ten of the deepest mines in Victoria:

Name.	Location.	Depth.
		Feet.
Moonlight Company	Stawell	2,409
Lausell's mine	Sandhurst	2,040
Victoria and Pandoia Company	Sandhurst	2,000
Newington Company	Pleasant Creek	1,940
North Old Chum Company	Sandhurst	1,841
Prince Patrick Company	Pleasant Creek	1,830
Great Extended Hunters Company	Sandhurst	1,820
Crown Cross United Company	Pleasant Creek	1,815
Victoria Reef Quartz Company	Sandhurst	1,798
Prince Alfred Company	Pleasant Creek	1,770

The most productive gold mine in the colony has been that of the Long Tunnel at Walhalla. Since it was found in 1867 the dividends paid to shareholders were $5,004,000. The total quantity of stone crushed was 302,670 tons, and the product was 473,275 ounces. This company is the only one in Australasia that has paid over $5,000,000 in dividends.

The yield of gold to the ton is now believed to be greater in Queensland than elsewhere in the colonies, although Dr. Hector states that the average is very large in New Zealand. In some places in the latter colony there has been as much as 600 ounces to the ton. The value of such a reef, says Dr. Hector, may be better estimated by those not conversant with the subject when it is stated that one-half an ounce to the ton is, in most cases, a profitable return. Dr. Hector is of opinion that gold mining in New Zealand is still in its infancy, and that it only awaits the judicious application of capital to extend to vast proportions.

At Stawell, in Victoria, the yield of gold from 2,306 tons of quartz, from a depth of 1,200 feet, averaged 8 dwt. per ton; 8,273 tons at Ballarat, same colony, at depths varying from 590 to 1,205 feet, averaged from 5 dwt. to 8 dwt. 19 grs. per ton; 87,347 tons at Sandhurst, at depths of 500 and 1,306 feet, from 7 dwt. 1 gr. to 2 oz. 6 dwt. and 14 grs. per ton; 20,521 tons at Castlemain, at depths varying from 300 to 745 feet, yielded from 6 dwt. 11 grs. to 6 oz. 18 dwt. 1 gr. per ton; 31,987 tons at Marysborough, at depths from 300 to 820 feet, gave a yield from 5 dwt. to 3 oz. per ton; 22,727 tons at Stranger's Creek, in Gippsland, at depths varying from 300 to 723 feet, yielded from 17 dwt. 23 grs. to 1 oz. 17 dwt. 1 gr. per ton, and 5,224 tons at Beechworth, at depths varying from 300 to 600 feet, yielded from 4 dwt. 17 grs. to 17 dwt. 2 grs. per ton.

Gold is believed to exist in large quantities in Western Australia, the largest colony in the group, but as yet very little has been done to develop the mines there. The rush to the Kimberly district last year was unprecedented since the influx to the Palmer gold fields in Queensland, but unfortunately the mines did not turn out as well as expected and much suffering was entailed upon the illy-advised persons who flocked there. Mr. R. T. Hindman, the Government geologist of Western Australia, who has traveled extensively in the Kimberly district, has recently prepared a sketch map showing the geology of about 100,000 square miles of that country. He states in a report accompanying the map that the wide-spread area of the carboniferous rocks in the district are of the highest interest to geologists, and that he was fortunate enough to discover a formation hitherto unknown to the colony, viz., the Devonian. These rocks, resting on the metamorphic beds of the Silurian, cover a very large space. Another very interesting discovery was a great mass of basaltic rock, which was traced for more than 100 miles, forming an extensive plateau 2,000 feet above the level of the sea and covering an area of 3,000 square miles. The auriferous country he passed through comprises an area of 2,000 square miles, and is traversed by the Margaret, Mary, Elvira, Panton, and Ord Rivers. The formation is principally Lower Silurian slate and schist of various kinds, traversed by an enormous number of quartz reefs. Mr. Hindman also reports that the river valleys and flats are in many places covered with extensive deposits of quartz gravel and drift, the quartz being divided from the denudations of the reefs. He says that he has never failed to find amongst the gravels good colors of gold and of an encouraging character. Very often good colors were obtained in every pan washed. Nuggets averaging from 3 to 190 ounces had been found. More than 2,000 ounces of gold were obtained from the Mount Burritt workings in the course of three months.

The gold mines of South Australia are only partially developed. The drought and the want of capital appear to be the principal ob-

stacles in the way. Important discoveries of the metal were found in 1886 at Kangaroo Island in that colony. The stone averaged about 16 dwt. of gold to the ton. Both quartz and alluvial mining are carried on at Eictrunga, Blackwood Gully, Myponga, Hahudroof, Ulooloo, Waukariuga, and Manna Hill. The gold fields of Tasmania have also been imperfectly developed. According to a recent report of the under secretary for mines of that colony, the indications are favorable for the coming year. The gold of Tasmania is said not to be of such uniform quality as in other parts of Australasia. The product of the Beaconsfield mine is worth £3 15*s.* ($18.24) per ounce; at Golconda and Dennesom £3 10*s* ($17.03) per ounce, but that from Lefeog, Fingal, and Mangara is worth £4 ($19.46) per ounce. A nugget weighing 48 ounces was unearthed at the west coast last year. The largest ever produced in the colony was found in 1883; it weighed 243 ounces and 1 dwt.

The conditions under which gold is found in Australasia are precisely the same as in other countries. The Australasian metal, however, is believed to be of a higher standard than that produced elsewhere, and in some places, for instance, Mount Morgan, Queensland, it may be said to be absolutely pure.

It has been stated by Lock, Percy, Liversedge, and other authorities on metals, that no gold has ever been found in nature unalloyed with silver, but Dr. Leibius, of the Sydney mint, who has very kindly aided me in the preparation of this report, says that considerably over 60,000 ounces of gold from the Mount Morgan mine has been found to be free from silver with the exception of a minute trace. He says, further, that it assayed $99\frac{7}{10}$ per cent. of gold; the rest was copper with a trace of iron. "The Mount Morgan gold," says Dr. Leibius, "is, as far as I know, the richest native gold hitherto found." The richest gold next to this comes from Victoria and assays 96 per cent. Mr. F. B. Miller, the inventor of the chlorine process employed in the Australian mints for refining gold, and to which I shall refer in another part of this report, is very decided in the opinion that the nearer we go northward in Australia the more silver the gold contains. He cites in support of this theory the statement that the average fineness of Victorian gold is 96 per cent.; that of New South Wales, 93 per cent.; and Queensland, 87 per cent. The Mount Morgan gold forms a striking exception to this rule. The Mount Morgan mine is now said to be the most valuable mining property in Australia. It is situated about 26 miles from Rockhampton, on the Dee River, in Queensland. The place of deposit is in the center of a hot spring or geyser. The stone produces about 3 to 12 ounces of gold per ton, and it is estimated that there are more than a half million tons at the mine accessible for crushing. The mine was discovered in 1882 by three brothers, the Messrs. Morgan, from whom it takes its name. It is situated at the summit of the mount, 1,125 feet above the level of the sea.

NUMBER OF MINERS.

There were 47,801 miners employed in the various gold fields in Australasia at the close of 1886, Victoria heading the list with 26,194; New Zealand, 11,178; Queensland, 7,160; New South Wales, 5,911; South Australia, 1,190; Tasmania, 868; and Western Australia, 300. Their wages average from 7*s.* to 10*s.* ($1.70 to $2.43) per day, and are graduated according to the locality of the mine. The miners usually live in tents or bark huts erected on land belonging to the Government or to the company employing them, and provide their own food.

MACHINERY AND MINING APPLIANCES

The bulk of the mining machinery and other mining appliances employed in the gold fields of Australasia is imported from Great Britain. Considerable quantities, however, are of colonial make, and perhaps a still larger proportion is imported from the United States. Indeed within the last two or three years quite an impetus has been given to the trade in American mining machinery through the success attending the operation of various kinds of American steam engines, furnaces, smelters, ore separators, quarrying machines, blasting batterers, pumps and pumping gear, rock drills, &c. Parke & Lacy, of this city, claim to have imported from San Francisco since the 1st of January, 1887, about $80,000 worth of mining machinery, against $13,000 for the corresponding period of last year. The estimated cost of all kinds of machinery and mining appliances used in the gold fields of Australasia is $19,737,412. About one-half of this amount is invested in Victoria alone, the exact figures for Victoria being $9,157,260. The machinery used in Victoria in alluvial mining consists of 214 steam engines of 6,758 horse-power, used in winding and pumping; 145 stamp heads, 138 steam puddling machines, 512 horse puddling machines, 144 whims, 107 whips or pulleys, 12,795 sluice forms and sluice boxes, 49 hydraulic hoses, 354 pumps, 155 water wheels, 87 quicksilver and compound cradles, 4 diamond drills, 13 boring machines, and 9 Root's patent blowers.

The quartz mining consisted of 871 steam engines of 19,689 horse-power, 76 crushing machines operated by other than steam power, 6,207 head of stamps, 55 buddles, 29 water-power winding and pumping machines, 302 whims, 409 whips or pulleys, 5 diamond drills, 7 stone breakers, 13 concentrating tables, 3 wheelers' pans, 17 Chilian mills, 31 amalgamators, 30 quicksilver and compound cradles, and 169 boring machines.

Among the various methods employed in Australasia for extracting gold from pyrites is that called the "Newbury Vantin System." This system is said to have given much satisfaction at Mount Morgan, in Queensland, and at Sandhurst, Ballarat, and Malden, in Victoria. The following is a description of the process: The usual mode of roasting the pyrites is adopted to free them from arsenic, sulphur, and other foreign substances, and then the calcined pyrites are mixed with water and brought to the consistency of a thin paste, and placed in a revolving iron cylinder lined with lead, where they are mixed with 1 per cent. of chloride of lime, and 1 per cent. of sulphuric acid, and rotated at a moderate speed, after air has been pumped into the cylinder to a pressure of 60 pounds to the square inch. The metallic gold attacked by the chlorine gas is converted into a chloride which is readily soluble in water, and after the air is blown off the contents of the cylinder are tipped into a filter, which is an iron cylinder having a percolating false bottom, out of which the air is exhausted by a vacuum pump, and water being freely poured upon the superincumbent pyrites, the result is that this is sucked through with marvelous rapidity, carrying the gold in solution. This process has hitherto occupied some 24 hours, but now three washings, taking half an hour altogether, are sufficient to treat the contents of the cylinder above, now rotating with a fresh charge. The false chamber is filled with a series of slanting cross pieces, which enable the exhausted solids to be tipped out after being discharged into the bottom receptacle from the upper part of the cylinder. The auriferous

stream is raised by a pump constructed of composite metal having no affinity to gold, into a vat where the sediment is allowed to gravitate, and it is then run into another, tested for gold with sulphate of iron, and run through a bed of charcoal, which attracts all the gold in a metallic form and allows the water to escape. The charcoal, when thoroughly impregnated, is brown in color, and on being gently scraped with a knife shows that it is saturated with gold, and which assumes its usual color. The charcoal is then burnt and the pure gold remains.

THE MINT.

The history of the establishment of a branch of the royal mint at Sydney is an interesting one. The people had for many years suffered from the want of a proper circulating medium. At one time coin of all kinds was so scarce in Australia that the governor of New South Wales issued a proclamation fixing the values of various kinds of coin at considerably higher rates than were allowed for them by the imperial treasury. A guinea was declared to be worth £1 2*s* ($5.34); a half-crown, 2*s*. 6*d*. (60 cents.), was valued at 2*s*. 8½*d*. (65 cents); 1*s*. (24 cents) was proclaimed to be worth 1*s*. 1*d*. (26 cents). The proclamation also made copper coin a legal tender to the amount of £5 ($24.33), and the recipient of that sum was obliged to carry home with him 37½ pounds weight of metal. At a later period the Government adopted the plan of allowing the issue of promisory notes by private individuals, payable on demand in copper coin. No one, however, was allowed to dispose of these notes at a less sum than the value on the face of them.

The appreciation of coin at that time can very well be illustrated by the statement that a Spanish dollar, worth 5*s*. ($1.21) was made to do duty for 6*s*. 3*d*. ($1.52) by an ingenious method of punching out of the center a circular piece called a dump and valued at 1*s*. 3*d*. (30 cents), whilst the rim, dignified by the name of "holey dollar," circulated for 5*s*. ($1.21),

After the discovery of gold in Australia there was a greater demand than ever for a proper metallic currency, and several of the colonial governments, in the desire to remedy the evil, authorized the coinage of gold, without waiting for authority to do so from the British Government. No objection was, however, made to this infringement on the prerogative of the Crown, for at that time probably no better expedient could have been adopted. The first coins made were sovereigns, and were issued at Adelaide, South Australia. They were alloyed with silver, instead of copper, and weighed 135 grains, instead of 123¼ grains, British standard. The Australian coin had upon the obverse side the figure of a royal crown, with the words "Government Assay Office, Adelaide," and on the reverse side "Weight 5 dwt. 15 grs. Value £1. 22 carats."

In 1853 the Imperial Government finally consented to the establishment of a branch of the royal mint at Sydney.

It was first agreed that the coin of the branch mint should not be a legal tender outside the Australian colonies, but afterwards the privilege of circulation was extended to the colonies of Mauritius, Ceylon, and Hong-Kong, and in 1866 the circulation was extended throughout the British Dominion.

The Sydney coinage was at first conducted at considerable pecuniary loss, as there was not gold enough in New South Wales to utilize the machinery erected at the mint. The difficulty was in time removed

by a regulation permitting the coinage of the produce of other colonies at reduced rates, and Victorian gold was attracted to Sydney. Subsequently, in 1872, a branch mint was established in Melbourne. The total product of both mints from their establishment to the close of 1885 amounted to 22,753,528 ounces, of which Sydney produced 14,108,558 ounces and Melbourne 8,222,808 ounces.

The returns of the Australian mint are sent to London before they are published in the colonies, and the statistics for 1886 will not be available until the issue of the annual report of the deputy master of the royal mint in June next.

Gold is the only metal coined at the Australian mints; the silver and bronze coinage used in the colonies being obtained from London. About three-fifths of the Australian coinage finds its way to the Bank of England.

The receipts of gold from coinage from all sources at the Sydney mint for the year 1885 amounted to 422,160 ounces, against 472,160 ounces for the year previously; the falling off having been occasioned by the decline in the quantity received from New Zealand, formerly the second gold-producing colony in Australasia. Light gold coinage to the amount of £60,453 ($300,922) was received for recoinage, and worn silver coinage of the nominal value of £4,530 ($22,040) was withdrawn from circulation. The number of assays made were as follows:

Gold assays:	
Rough	2,717
Refined	646
Standard	1,792
	4,155
Silver assays:	
Parting	2,680
Wet	179
	2,859

Two hundred and thirty-three mineral assays were also reported, and 48 samples of quartz, weighing over 53 tons, were treated experimently, and 143 ounces of gold were extracted by amalgamation. About 8 per cent. of the gold was received in its native state and the remainder had been previously melted or otherwise treated. The whole was melted, assayed, and valued, and 409,685 ounces were refined by chlorine process, which produced 338,892 ounces of refined ingots of the average assay of 996.0 and 58,604 ounces of silver; 386,696 ounces of refined ingots and alloy, and 309,265 ounces of Scissel were melted into standard bars; the average assay of the ingot bars was 916,746, and of the Scissel 916,734; the highest and lowest reports being respectively 917,250 and 916,425 for ingot bars, and 917,250 and 916,400 for Scissel; 691,169 ounces of standard bars were passed on for coinage and 381,862 ounces of coin returned to the bullion office.

The consumption of dies was at the rate of one pair for every 40,000 pieces. The average weight of the sovereign was .256825 of an ounce, and the average assay 916.693.

The total quantity of gold received at the Melbourne branch during the year 1885, according to a recent report of the deputy master of the mint in that city, was 836,168.89 ounces, which contained by assay 860,542.362 ounces of standard or sovereign gold, and from which 28,951.05 ounces of fine silver were extracted. During the previous year 940,642.28 ounces of bullion and rough gold had been

received, which contained by assay 976,495.376 ounces of standard gold, and from which 27,070.26 ounces of fine silver were extracted.

The quantity of gold received at the mint during 1885 has therefore been less than that received in 1884 by 104,473.39 ounces. This falling off has been mainly caused by the decrease in the quantity of gold received from other colonies.

The coinage of the year was £2,972,000 against £2,966,000 for the year previous. The average weight of the sovereigns and half-sovereigns was, respectively, .25682 ounce and .12843 ounce, and the average assay of both was 916.62. The total value of gold coin and bullion issued was £3,351,838 18*s.* 8*d.*, or a decrease of £449,889 10*s.* 1*d.* from that issued in 1884, which had been £3,801,728 8*s.* 9*d.* The following are the assays made at the Melbourne branch during the year 1885:

Coin	1,188
Standard bars	3,904
Rough gold parting	9,308
Refined	2,884
Proof	3,783
Silver	377
Sweep and mineral	36
	21,480

I am indebted to Mr. Robert Hunt, deputy master of the mint at Sydney, for the following table, showing the value of coins struck at the London, Melbourne, and Sydney mints from 1876 to 1885, inclusive:

Year.	London.	Sydney.	Melbourne.
1876	£4,696,700	£1,643,000	£2,124,000
1877	981,400	1,500,000	1,527,000
1878	2,295,144	1,822,000	2,171,000
1879	35,050	1,413,000	2,740,000
1880	4,150,058	1,499,000	3,052,800
1881	Nil.	1,991,000	2,345,800
1882	Nil.	1,324,000	2,519,000
1883	1,435,228	1,218,000	2,050,000
1884	2,396,513	1,505,000	2,942,000
1885	2,973,458	1,486,000	2,966,000

It will be seen from the above table that no gold coin was struck at the London mint during the years 1881 and 1882, the supply from the Australian mints being sufficient to meet all requirements.

METHOD OF REFINING GOLD.

The method adopted at the Australian mints for refining gold and silver is the invention of Mr. F. P. Miller, formerly one of the assayers at the Sydney mint, and now superintendent of the bullion office at Melbourne. It consists simply in passing chlorine gas through the metal. The process was inaugurated at Sydney in 1869, and at Melbourne in 1872. The total amount of gold operated upon at both mints since the introduction of the process has been about 15,000,000 ounces.

It was believed for many years that previous to Mr. Miller's discovery the use of chlorine gas for refining gold was altogether un-

known, but the fact is it was successfully employed by Malaguti Duroche and others, in Paris, many years previous, and Mr. Louis Thompson, in a communication to the Society of Arts, of London, as early as 1838, said:

> The plan I submit for assaying and purifying gold is no less simple in execution than certain in effect, and is founded on a circumstance long known to chemists, viz: That not only has gold no affinity for chlorine at a red heat, but that it actually parts with it at that temperature, although previously combined.

Professor Aiken and others about the same period published the result of a series of successful experiments in purifying gold with chlorine gas. These experiments, however, were conducted on a smaller scale, and should not affect in the least the credit to which Mr. Miller is justly entitled, for there is no evidence to show that he had ever heard of these experiments. Dr. John Percy and other scientists, who have investigated the history or origin of the invention, are of the opinion that Mr. Miller was the first to show that the process was fully practicable, and especially with the view of saving the silver combined with gold. The method appears to have given much satisfaction at the Sydney and Melbourne mints, principally because Australasian gold is so largely impregnated with silver, the latter metal often running as high as 40 per cent.

It is admitted, however, that when auriferous silver occurs, as well as argentiferous gold, the process of dissolving out the silver with acids is much more economical than the chlorine process. The furnace used in the Miller process differs very little from the one commonly used in gold melting. The flue is brought near the top, so that the crucibles holding the molten gold can be placed high up in the furnace without being cooled by the draft. The crucibles are made of clay, and are capable of holding about 700 ounces of gold each. They are provided with loosely fitting covers made of the same material, each having two small holes bored through them. The crucibles are first fitted with a solution of boiling borax, for the purpose of glazing their surfaces and rendering them impervious to melted chloride of silver.

The pipes through which the chlorine passes are also made of clay, the lower ends of which are heated so as to prevent them from splitting. The jars for generating the gas are of the best glazed stoneware, and hold from about ten to fifteen gallons each. The chlorine gas from the generator is conducted into a leaden pipe fitted with branches for several furnaces respectively, all intermediate connections being formed by means of vulcanized india-rubber tubing. The crucibles are slowly heated to a dull red color and the gold is introduced in the form of what is known as the "slipper-shaped ingot," the narrow end being placed downwards. As soon as the gold is melted a small proportion of molten borax is poured upon it. The clay pipe is then introduced and a small quantity of chlorine gas is passed through, so as to prevent the gold from rising and soldifying in the pipe. The pipe is gradually depressed until it touches the bottom, where it is kept down by means of a weight at the top. The compressor is then relaxed and the gas bubbles up through the molten gold, without causing any projection of the globules. Hydrochloric acid is introduced from time to time into the generator to keep up a rapid evolution of chlorine. When the gas first passes into the molten gold-fumes escape from the holes in the lid or covers of the crucibles. These fumes consist of volatile chlorides of the baser metals, and not

of the chloride of silver. So long as any of the silver remains in the gold, the whole, or nearly the whole, of the chlorine continues to be absorbed. When the operation is nearly over, fumes of a darker color than those produced at first make their appearance, and the end of the operation is indicated by the color of the flame or luminous vapor, which is at first of a bright yellow and then a deep reddish brown. The quantity of chlorine gas employed in the process depends upon the quantity of gold operated upon. The time required to deliver sufficient chlorine to refine about 400 ounces of gold of 900 assay is usually from one to two hours, according to the size of the pipes employed and the rate at which the gas is generated.

As soon as the operation is over the gold is allowed to stand until it solidifies. It is then poured upon an iron table, remelted and cast into bars. The chloride of silver is melted in clay crucibles prepared with borax, together with from 8 to 10 per cent. laminated metallic silver. When the contents are thoroughly heated, the crucibles are removed from the furnaces, and after standing for a few minutes the still liquid of chloride of silver is poured into molds and cast into slabs. The gold in the chloride of silver alloys with the metallic silver and forms a cake at the bottom of the crucibles.*

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, April 12, 1887.

THE HARVEST OF NEW SOUTH WALES.

REPORT BY CONSUL GRIFFIN, OF SYDNEY.

The New South Wales agricultural returns for 1887 show a more bountiful harvest than that of the previous year. In wheat, the principal crop, there was an increase of 3,222,026 bushels, the figures being 5,955,159 bushels for 1887, against 2,732,133 for 1886. Oats increased from 279,107 bushels to 606,744 bushels, barley from 85,606 bushels to 135,474 bushels, hay from 192,372 tons to 349,982 tons. The crop of potatoes increased from 38,695 tons to 48,600 tons. The grapes for wine increased from 555,740 gallons to 601,881 gallons. There was, however, a decline in the oat crop from 4,336,163 bushels in 1886 to 3,819,772 bushels in 1887. There was also a falling off in the yield of sugar cane, the decline being from 239,347 tons in 1886 to 167,959 tons in 1887. The tobacco crop during the same period declined from 22,947 cwt. to 14,970 cwt.

New South Wales, being south of the equator, the harvest is over before the first of March, and in some of the northern districts much earlier than that. The following table shows the yield of the principal crops in New South Wales, with the number of acres under cultivation for each year from 1878 to 1887, inclusive.

*Consul Griffin described this process in his report on the silver mines of Australia, printed in Consular Reports No. 57, October 1885, p. 12.

Year.	Wheat.		Corn (maize).		Barley.		Oats.	
	Area.	Yield.	Area.	Yield.	Area.	Yield.	Area.	Yield.
	Acres.	*Bushels.*	*Acres.*	*Bushels.*	*Acres.*	*Bushels.*	*Acres.*	*Bushels.*
1878.....	176,686¼	2,445,507	105,510	3,551,806	5,055	99,485	1,580¼	358,853
1879.....	233,252¼	3,439,326	130,582¼	4,420,580	6,152	132,072	22,129	447,312
1880.....	223,384¼	3,613,266	135,084	4,761,856	6,130¼	131,541	23,883¼	516,987
1881.....	253,137¼	3,717,355	127,196	4,518,897	8,056	168 395	17,922¼	356,121
1882.....	221,887¼	3,405,966	117,448¼	4,930,596	6,426¼	135,218¼	16,347¼	356,566
1883.....	247,361	4,042,395	118,186	457,635	6,473¼	138,050	24,817¼	617,485
1884.....	289,757	4,345,407	123,634¼	4,588,604	5,081	106,496	7,810¼	376,635
1885.....	275,249¼	4,248,394	115,650¼	2,969,585	7,085¼	148,869	9,472½	425,230
1886.....	264,807	2,768,330	137,709	4,235,163	5,297¼	85,606¼	4,117	279,107
1887.....	337,369	595,159	146,839	3,819,772	6,209	135,474	23,781	606,744

Year.	Potatoes.		Sugar cane.		Tobacco.		Grapes for wine.	
	Area.	Yield.	Area.	Yield.	Area.	Yield.	Area.	Yield.
	Acres.	*Tons.*	*Acres.*	*Pounds.*	*Acres.*	*Cwt.*	*Acres.*	*Gallons.*
1878.....	13,862¼	34,957½	3,331¼	16,883,328	399	3,049	4,183¼	706,431
1879.....	16,734¾	53,590	2,949¼	18,278,786	885	7,982½	4,237½	684,783
1880.....	9,271	62,227¾	3,675½	17,229,296	592	6,221½	4,266¼	733,576
1881.....	19,095¼	52,111¼	4,465¼	16,352,336	1,794¼	19,469¼	4,800¼	602,007
1882.....	15,943¼	44,338	4,988¼	17,813,376	1,625	18,311½	4,027½	513,688¼
1883.....	14,403¼	43,460¼	6,362½	11,650,688	1,815	17,540¼	4,448	543,696
1884.....	14,353½	36,976¼	7,583	35,228,640	1,785¼	20,006¼	4,378¼	589,604
1885.....	12,437¼	31,334¼	6,997	21,835,072	1,446	9,914¼	4,584	441,612
1886.....	15,166	38,695	9,583¼	41,359,360	1,603	22,947½	5,247½	555,470
1887.....	19,585	48,600	5,915	28,586,400	1,193	14,970	5,114	601,881

AREA UNDER CROP AND NUMBER OF HOLDINGS.

In 1886 there were 38,582,723 acres in New South Wales held for cultivation against 18,210,796 acres for 1877, an increase of 20,371,927 acres, but there was not a corresponding increase in the number of acres actually under cultivation.

The increase of the latter during the decade was from 513,840 acres to 868,093 acres. Of the land held for cultivation last year 32,717,515 acres were inclosed, against 11,020,968 in 1877. The extent of land inclosed in 1886 was 5,002,114, against 6,675,887 for 1877, a decrease in the decade of 1,173,773. These figures show that while cultivation does not advance, that there is great activity going on in taking up land and fencing it in for speculative purposes, and which, to say the least, does not present a very encouraging outlook for the agricultural interests of the country.

AVERAGE PER ACRE.

The average yield of wheat per acre in New South Wales in 1887 was 17.64, against 13.07 for 1886. It was 15.27 in 1885 and 14.43 in 1877. The average in New South Wales, while not as high as that of New Zealand or Tasmania, is considerably more than that of Victoria and South Australia, the two principal wheat-producing colonies in the group. The average yield in the former colony for a term of ten years was 12.16 bushels. The average of the present harvest there was 11.54 per acre. The total wheat area of the colony of Victoria being 1,044,348 acres and the yield 12,048,879 bushels. The average yield in South Australia during the last decade has been 7.10 bushels per acre. In 1886 it was as low as 4, and in 1883 it was 4.21.

The average for a term of ten years in Tasmania was 18.36 bushels per acre. The average yield of maize per acre is larger in New South Wales than in Victoria, the former colony having 26 bushels and the latter 37 bushels per acre. In oats New South Wales averages 22.51 bushels per acre, and Victoria 20.23 bushels. New Zealand, however, takes the lead in the average of oats as in all other grains. The average of oats in that colony for a term of ten years was 32.51 bushels per acre. In 1887 it was 35.17. The average yield of barley in New South Wales in 1887 was 21.82 bushels; in Victoria it was 20.86; New Zealand, 30.38. In some of the southern districts of Australia the yield of grain to the acre is something enormous. Indeed, it is said that the most fertile land in the world is found in New South Wales along the margins of the rivers, particularly the bottom lands of the Clarence, Macleay, Manning, Hunter, Hawkesbury, and Shoalhaven. This fertility is counterbalanced by the frequency of floods at times when the crops are ready to be gathered. Wheat now seems to be more profitably grown than formerly on the high table lands of the interior, about from 3,000 to 4,000 feet above the level of the sea. Rust, the great enemy to wheat in Australia, is comparatively unknown on the table lands, and especially in the New England district in the north, Orange in the west, and in Tumat and Young in the south and southwest.

METHODS OF WHEAT FARMING.

Experience has shown that the most profitable method of growing wheat in Australia is to combine the industry with that of rearing sheep. Professor Cunstance, of the Roseworthy Agricultural College, is credited with being the first to introduce the system in Australia. Feed in most cases has to be provided for the sheep in the summer, and the professor's plan is to grow a root or green crop, as sheep folded on such a crop improve the quality of the soil. Fresh seed from an early variety is recommended. The professor noticed that two imported varieties, grown on the Roseworthy farm last year, matured much earlier than the ordinary kind. He strongly recommends the use of super-phosphates for improving the land, especially when a good article can be purchased at about £4 ($19.46) per ton. He noticed that in most cases that 3 cwt. of super-phosphates to the acre more than doubled the crop. His plan for getting rid of red rust is to obtain a new variety of wheat and grow a root or fodder crop which can be fed off by sheep, if not required, as a preparation for the wheat crop.

Mr. James Harold, a high authority on Australian agriculture, is also very favorably impressed with the system of combining wheat and sheep farming. Mr. Harold says that the most favorable results have been obtained by this system in the Riverina districts, where it was said wheat would not grow. He noticed that the farmers who adopted this method, with alternate cropping, were enabled last year, which was the dryest season ever known in the colonies, to realize, even on poor land, from ten to twelve bushels to the acre, and on good land from thirty to forty bushels per acre. In response to a communication of mine requesting information upon the subject of wheat growing, he says:

After traveling over the great wheat fields of Europe, America, and Australia I am proud to be able to give the highest meed of praise for wheat cultivation to a few

energetic men in the Cootamundra, Young, and Grenfell districts of New South Wales. These men know very little of theories of agriculture, and their system is one of experience only, and it is encouraging to everybody to see how well they have succeeded.

He says, further, that these men usually possess from 500 to 3,000 acres of land, and their plan is invariably to crop every alternate year, and to permit sheep to graze on the land in the intervening year. They plow their land in the autumn as soon as possible after the sheep have gone through the stubble. This kills the weeds and wild oats and opens the soil to the sun and atmosphere. The land has never been exhausted, and consequently there are no inferior weeds, but in ordinary seasons an abundance of green and succulent herbage makes its appearance, and sheep or cattle are turned in to eat it down. The first plowing is shallow, then it gets a deep spring plowing, and then when sowing time comes, the seed is put in with a cultivator, or perhaps another shallow plowing. Mr. Harold stated in a lecture he delivered recently at the Technical College of Sydney that the successful farmers in Australia shallow plow in their seed, that is, they sow their seed on the surface of the soil and shallow plow it in to a depth of about four inches. He said that farmers who followed this plan are enabled to grow twice as much wheat as their neighbors who refuse to adopt it.

The best varieties of seed wheat suited for Australian soil are the purple straw, the New Zealand straw, white Tuscan, Talavera, and early bart. The so-called Mexican wheat, which was distributed last year through the agency of the minister for agriculture of Victoria, and from which so much was expected on account of its reputed earliness and rust-resisting qualities, proved a complete failure in many districts. It turned out to be the common red Indian wheat, which has been in the colonies for many years. Its straw is very weak and slender, and when sown on rich soil falls down and cannot be harvested without great difficulty. The successful farmers here seem to place more reliance on the purple straw than any other, although very fair results have been obtained from white Tuscan and early bart. The time for sowing in New South Wales and Victoria is in June or July, but in South Australia and Queensland it begins in the month of May. At the Roseworthy farm last season the purple straw wheat sown on the 13th of May was harvested on the 10th December.

IMPORTS OF WHEAT.

The quantity of wheat required in New South Wales for the present year is estimated at 6,722,086 bushels. These figures show a deficiency over the harvest returns of 766,927 bushels. Last year the short crop made the imports much larger than usual, although the colony for many years has not been able to produce a sufficient quantity of wheat and other breadstuffs for home consumption. The imports of wheat into the colony during 1886 were 1,105,079 bushels, valued at $1,000,435, against 545,423 bushels, valued at $477,725, for the year 1885. Of the imports for 1886, New Zealand furnished the largest proportion. The quantity imported from that colony was 437,486 bushels. The United States came next, with 356,005 bushels. Victoria furnished 285,721 bushels, and the remainder was from India, South Australia, and Queensland.

The following table shows the quantity and value of wheat imported into New South Wales for each year since 1877:

Quantity and value of wheat imported into New South Wales for each year from 1877 to 1886, inclusive.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Bushels.			*Bushels.*	
1877	828,526	$1,356,090	1882	698,518	$962,615
1878	780,604	1,099,175	1883	24 ,099	308,400
1879	442,849	546,2 5	1884	469,785	422,330
1880	422,418	471,725	1885	545,422	477,735
1881	2.0,118	298,210	1886	1,10 ,079	1,101,435

It will be seen that the imports were larger during 1886 than those of any previous year. The imports of other breadstuffs were also in like proportion. The total value of all kinds of breadstuffs imported into New South Wales for 1886 was $5,117,275, against $3,655,080 for the year 1885. Of the imports for 1886 the value of wheat, 1,105,079 bushels, was $1,001,435; flour, 61,496 tons, was $3,446,860; bran, 1,065,196 bushels, was $450,360; pollard (a mixture of bran and meal), 203,812 bushels, $56,525; sharps, 99,944 bushels, was $26,500; oatmeal, 33,261 cwt., was $134,595; total, $5,117,275.

The subjoined table shows the quantity and value of wheat imported in New South Wales for 1885 and 1886, and the names of the countries whence imported.

Countries.	1885.		1886.	
	Bushels.	Values.	Bushels.	Values.
New Zealand	270,618	$284,380	427,486	$434,040
United States	.....	.....	356,005	354,175
South Australia	154,105	156,180	3,223	4,265
Victoria	120,684	117,165	285,771	288,645
Queensland	8	5	1,964	2,455
Tasmania	8	5	2,054	2,385
India	.....	.....	18,696	16,570

AGRICULTURAL IMPLEMENTS AND MACHINERY.

There is no doubt that the Australians prefer their own plows to any other, although they are much heavier and clumsier and more expensive than those imported from the United States. The plows generally in use are the ordinary two and three furrow plows, made wholly of iron. The Australian farmer has a decided objection to the use of plows with wooden handles. Several Saint Louis and Louisville firms have succeeded in building up quite a trade in American plows, especially in this colony and Queensland, but these implements have been manufactured solely for the Australian market from plans furnished by agents who have visited the colonies and who remained here long enough to understand the requirements of the Australian farmer.

American harrows are rapidly supplanting all others. The American disk harrows especially are very popular, for with them the farmers are in many cases enabled to dispense with the use of plows.

In reapers and binders the Americans have heretofore had a decided advantage, but English manufacturers now make such close

imitations of them that the competition for the trade in these articles is very keen. In some portions of the colonies the Australian stripper is preferred to the reaper and binder. The stripper, although usually called an Australian invention, is in reality an adaptation of an American machine which has been in use for many years in California and other Western States of the Union. It not only cuts the grain, but dispenses with the necessity of thrashing it. The stripper is operated like the reaper and binder, only it is fitted in front with a combining apparatus which catches the heads of the grain and, stripping them off, passes them into a box, from which they are discharged in a heap and put through a cleaner. The machine is able to cut from five to nine acres of wheat per day, according to the condition of the crop and weather. In wet weather or in early morning it does not act well. Some of the machines have placed in them ordinary thrashing drums, which thrash any heads not stripped. The machines with drums attached are called damp-weather strippers. The stripper was first manufactured in Adelaide, South Australia, where it is more popular than in any of the other colonies. Recently, however, factories have been established for its manufacture in Melbourne and Sydney.

The introduction of the American reaper and binder did not at first interfere with the supremacy of the stripper, and especially in South Australia, but in time the American machine became a very formidable rival, not only in Victoria and New South Wales, but in South Australia. It should be remembered, however, that in some localities, for instance where straw is regarded as of little value, the stripper is almost sure to be preferred, besides, harvesting with the stripper is generally admitted to be a very economical process, from the fact there is only one loss, instead of several, as in the different processes of binding, stooking, carting, and thrashing. Moreover, in some districts in Australia the crops are so thin and short that they cannot very well be harvested with the reaper, and it is said that the practice of burning the straw on the field renders the land very fertile, an advantage which cannot be had when the reaper is used. Nevertheless, it will not be questioned, I think, that the reaper is becoming more and more popular, and especially near the large cities and towns, where straw is required. In the southeastern district of Victoria, and along the Goulburn, the reaper is invariably used.

According to the Melbourne Argus, all the American reaping and binding machines that could be obtained in Victoria last year were purchased, and more of them would have been used had they been available. The system of harvesting with the stripper, in spite of its economy, is very far from being a clean one, and the Argus recommends that a system of farming be adopted that will embrace the use of both machines, from the fact that reaping can be commenced a week or a fortnight earlier than stripping, and that stripping can be carried on long after reaping will be impossible. By this means all bustle and hurry can be done away with at harvest, and at the same time the farm stock would never be without straw. The stripped wheat can also be sent to an earlier market, if necessary, while that which has been reaped will the more easily be allowed to wait for shipments. The stripper, however, is subject, I think, to very great improvement, and I am surprised that manufacturers of agricultural machinery in the United States have not sent to Australia for samples of the stripper, with a view of making a machine on the same principle which will be better suited for this market. A new machine is greatly needed in the colonies.

The Californian combined reaper and cleaner, while admirably adapted to the States on the Pacific slope of America, is too cumbersome for Australian farms. What seems to be wanted is a lightly constructed reaper and cleaner that could be operated with six or eight horses. Such a machine would, I feel assured, meet with a ready sale, not only in New South Wales, but throughout Australia.

OBSTACLES TO AGRICULTURAL PROGRESS.

The present land law of New South Wales is thought by the farmers to be a serious obstacle in the way of agricultural progress. The law is said to have been made more for the benefit of the wealthy squatter, or sheep owner, than for the farmer, and there is a loud clamor from one end of the colony to the other to have it repealed. It is certainly very difficult to obtain land, except for pastoral purposes, upon favorable terms in New South Wales. The laws of the other colonies are said to be more liberal in this respect, but it does not appear that agriculture has advanced in any of them to the extent that it has in countries far less favored in soil and climate. South Australia is the only colony in the group that has ever made a specialty of growing grain for export, but even there the results have not been as satisfactory as the people anticipated. As far back as 1843, or long before the wheat fields of California and of the great Northwest were ever thought of, wheat was cultivated for export in South Australia, and it is perhaps not generally known that California for many years obtained the bulk of her supply of seed wheat from that colony. Now, however, the Australasian colonies, with an area very nearly as large as the whole of the United States, are unable to produce as much wheat as the State of California. The total yield of wheat in all the Australasian colonies is seldom more than 35,000,000 bushels per annum whilst California, besides supplying her own requirements, has not unfrequently considerably more than that amount available for export.

One of the chief obstacles to wheat growing in many parts of Australia is the heavy cost connected with clearing the land and preparing it for crops. The timber is principally composed of various kinds of hard wood, and after the trees have been cut down and hauled away it is very difficult to remove the stumps, and where stumps exist machinery cannot be employed for wheat growing. Moreover, the cost of labor and provisions of all kinds is much higher in Australia than in any of the wheat-growing districts of the United States; whilst the freight charges on the Australian railways are more than double those of America.

Another difficulty to agricultural progress in Australia is that vast areas of country are taken up for sheep farming. In the Riverina district there are plains so vast that a man on horseback feels like a ship at sea. As far as the eye can reach there is the vast level, unbroken by a single obstacle, save perhaps a glimpse here and there of a few trees outlining the meandering of some sluggish water course. The formation of the country is lacustrine of unknown depth, and the plains gradually slope to the west at the rate of one foot per mile. An unlimited supply of good water exists in the district on an average of 80 feet deep, and in some instances more than that. At present this magnificent domain is almost entirely under sheep pasture, which affords the squatter a return of 6*s*. ($1.44) per acre, or about one sheep to the acre. Considerable areas of this land have been purchased

outright, but a much larger proportion is owned by the Government and is leased for pastoral purposes from nothing up to 4 cents per acre per annum.

A vast area of this land is infested with rabbits, the number of which is estimated by hundreds of millions. The station master, as a rule, is the Government receiver of rabbit skins, and it is sometimes questioned which pays the best, killing rabbits or rearing sheep. Wheat of excellent quality, averaging from 25 to 30 bushels to the acre, could be grown in this district (if the land could be obtained), and the industry would not interfere in the least with that of sheep farming.

The uncertainty of the rainfall in Australia is perhaps the greatest difficulty with which the Australian farmer has to contend. The drought, which is unusually severe in the northern and western districts on account of the intense heat of the sun, is often prolonged for several years. The rain, if it comes at all, is almost sure to come at a time when it is not needed. The drought during the last two or three years has been so destructive that a very general interest has been aroused throughout the colonies in the question of irrigation as a means of increasing or insuring crops.

A number of gentlemen of acknowledged ability, including the Hon. Alfred Deakin, the present minister for agriculture in Victoria, have recently visited the States on the Pacific slope of the United States for the purpose of reporting upon the system of irrigation employed there and the advantages to be derived from its adoption in Australia. The main difficulty, however, in the colonies is that all the rivers and streams are below the level of the land suitable for irrigation. Pumping, or some means of water lifting, has, therefore, to be resorted to, and this of course increases the cost of irrigation. The quality of the water, however, and the fact of its being stored in the river beds, and of its exposure to the heated atmosphere, make its properties especially valuable for the production of crops. Very little, however, has yet been done in any of the colonies in the way of irrigation, but the little that has been done has given satisfaction, and the system adopted is certainly extending. Some of the large farming companies in the interior of New South Wales are either irrigating by means of pumping machines, or are arranging for the purchase of such machines. The old English riparian laws, however, which prohibit the damming of water courses, or in any way interfering with the natural flow of water, form an important obstacle to irrigation in Australia. It is likely, however, that all the colonies will adopt an intercolonial law, making all water courses, creeks, lakes, rivers, &c., the property of the respective Governments, so that water can be stored in suitable places for irrigation. The interior river system of New South Wales, to which I referred at length in my special report on "Irrigation in Australia," offers enormous facilities for water storage in the river beds. It is estimated that fully 5,000,000 acres could be supplied with irrigation water from the sources mentioned. The cost could be enormous, but the result would more than justify the cost, as the land over an immense area is of excellent quality for the purpose.

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, N. S. W., May 18, 1887.

NEW ZEALAND—A NEW DISCOVERY FOR DESTROYING THE CODLIN MOTH.

REPORT OF CONSUL CAMPBELL, OF AUCKLAND.

The importation of American apples into the port of Auckland is prohibited by municipal enactment, because of the fear, as is alleged, that the codlin moth, the great enemy of the apple crop, would, with the introduction of the apples, find its way from America into this colony. The purpose of this prohibitory law, it must be admitted, is reasonable, for it is natural for a community to protect its own industries, as well as its own people, from impending danger in any legitimate manner. But if the law is founded in mistake or the reason for its existence no longer remains, then it ought to cease. Notwithstanding this precautionary measure, the codlin moth is by no means a stranger in this colony. It was here, as I am informed, long before the enactment against American apples. It is here now, and its ravages are seen and felt in orchards in different parts of the country, and all efforts to stop its destructive warfare upon the apple crop are now, and have been, as ineffective and unavailing as in America or other parts of the civilized world. The nature and habits of the codlin moth are such as to render it difficult to devise a means for its destruction.

My attention has been called to a new and quite novel mode of destroying this pestiferous and destructive insect, which, I incline to believe, is unknown in the United States, and I therefore report it that the fruit growers may avail themselves of the idea, and prepare to set in motion this new device for the destruction of this hitherto unconquerable pest and destroyer of the most delicious and valuable of all fruits.

Mr. H. C. Field, of the Wanganui district, has forwarded to the Auckland Museum some flowers of a plant called physianthus, sometimes called arauja, which has lately been recommended for planting in apple orchards for the purpose of not only checking the increase of codlin moth, but destroying it. The plant is a twiner, and bears a profusion of flowers, which bloom through the summer and autumn. The flowers are quite fragrant, of a whitish color, rather handsome, very sweet scented, producing an abundance of honey, and are very attractive to moths and insects generally. The plants of the physianthus twine and grow up the trunk of a tree, and spread out through the limbs, something like ivy, but do not adhere so closely to the tree nor grow anything like so thick or heavy. It would not damage an apple tree to plant this near the root and train it up the trunk and through the branches. Its cultivation would be of great value to those engaged in the bee industry, on account of the sweetness of the flowers.

The manner of the moth's destruction is explained as follows: In order to reach the honey in the flower the proboscis of the moth has to pass through a narrow cleft, which is so shaped that although the proboscis can be easily and readily inserted, it is by no means an easy matter for it to be withdrawn, and, as a matter of fact, great numbers are unable to remove it, and are held prisoners at the entrance of the flower blossom until they die. The flower is sweet scented, and

the moths are attracted to it in great numbers, and, once in the flower, they become prisoners, never to get out alive. They visit the flower and insert their proboscis in a narrow cleft, and in doing so touch a body called the retinaculum, which has a notch in one side. The proboscis of the insect becomes fastened in the notch, and cannot be withdrawn by an insect so weak and frail as the moth. If the insect were strong, like a bee, for instance, it could pull away the retinaculum and free itself, but the moth has not the strength to do so, and dies in the flower.

Mr. T. F. Cheeseman, an accomplished gentleman, and superintendent of the Auckland Museum, to whom I am indebted for this information, showed me some of the flowers. They contained a number of dead moths, and it is stated that in the district where these flowers grew, during the whole of the past summer the flowers at that place were loaded with dead moths. It is plain that nature has supplied this beautiful flower as a prison and death pit for insects.

The physianthus or arauja plant is a native of South America, and was introduced into this colony by Major Lockett, by way of the Cape of Good Hope. It grows well here, and I feel quite sure that it would grow and thrive well in the United States, especially in Oregon, California, and Arizona. It may be that the plant is well known in the United States, but its use as a means of destroying codlin moth, I incline to think, is not known there.

JNO. TYLER CAMPBELL,
Consul.

UNITED STATES CONSULATE,
Auckland, May 22, 1887.

WATTLE-TREE CULTURE IN NEW ZEALAND.

REPORT OF CONSUL CAMPBELL.

As the forests in America are fast disappearing, it is well to look to the cultivation and growth of trees to supply the place of those, that have fallen under the ax of civilization, and from what I can learn of the Wattle tree, I confidently believe it is one of the many the cultivation and growth of which would be successful and profitable in many parts of the United States, particularly in the Pacific States and Arizona, where the climate and soil are so very similar to New Zealand and Australia, and I see no reason why the same result wo uld not occur in Florida and the Gulf States of the Union.

The Wattle tree is a native of South Australia, but grows extensively in New Zealand and in the Australasian countries, into which it has been introduced by the hand of enterprise. It belongs to the Acacia family of tree and grows readily in almost any kind of soil in which it has been tested. But its growth is more rapid in sandy places. This is characteristic of the Acacia and evergreen shrubs, but the Wattle will grow rapidly in soil which is not permitted to become too hard, and it is the part of good husbandry to keep the soil well cultivated until the tree is well up in size. It thrives well in this colony and without doubt in all of the Australasian colonies.

ITS VALUE AS A TREE.

The greatest value of the tree is its bark, which always commands a good price for tanning purposes, but the wood of the tree can be and is utilized for barrel and cask staves, wagon and plow timber, ax and pick handles, and many other articles requiring tough, hard, and durable wood.

The gum which exudes from the tree is also of value, always commanding a profitable price, and its collection does not affect the bark or injure the tree. The less gum there is left in the bark the more valuable it becomes.

It is an ornamental tree, and presents a nice appearance. I find it in yards, and it looks as well as any tree usually planted in such a place. There are several kinds growing in this colony, but the best are the black or feather leaf (*Acacia decurrens*) and the golden or broad leaf (*Acacia pycnantha*). The bark of the Wattle, it is believed, yields a larger percentage of tannin than perhaps any other tree grown in this colony, and I am told by a gentleman of experience that it is better than the oak tree of America, and that tanners who have tried both prefer it to the oak. Its cultivation is looked upon as one of the most profitable industries, and the question of allowing a bonus as an inducement to persons to engage in planting the tree is being agitated in the agricultural papers in the colony.

HOW TO PLANT THE TREES.

The policy advocated, and it is certainly the part of wisdom, is to use the poorer pasture lands for the cultivation and growth of this tree, and it stands to reason that the planting of trees upon this kind of land improves its character and makes it more productive, to say nothing of the value added to the land by the growth of paying trees upon it. The bark is stripped off of the trees in the season of the year when the sap is most active; and in order to keep up the supply the planting is done annually, thus replacing the trees that have been killed by taking off the bark. I am indebted to *Brett's Colonist Guide*, an excellent hand-book on New Zealand, for the mode of planting the trees and other interesting facts:

> Planting can take place with the early showers of autumn or spring; and as the outer covering of the seed is peculiarly tough, rendering it impervious to ordinary germinating influences, it requires before sowing to be soaked in hot water until it becomes soft. As the seeds are small and require to be kept near the surface, a very slight sprinkling of earth over them is sufficient.

I am told that unless the seeds are well soaked in hot water before planting they will never germinate in the ground. It needs only an inspection of the seeds to confirm the correctness of this statement. The ground should be plowed deep, well harrowed and rolled, and the rows laid off about five feet apart. The use of a drill for this purpose would be very good. An owner of a plantation of 186 acres laid the ground off with a drill and then sowed the seeds in the rows by hand. The plan seemed quite slow, but the result was good. The work was accomplished in eight days. The seed used in this case were of both varieties, golden and black, but the golden not being so hardy as the black did not fare so well, being slightly frost-bitten. At the end of seven months many of the black wattle were three feet high. In one district trees of seven years' growth attained the height of forty feet and three feet in circumference, yielding three hundred pounds of bark to the tree.

I take the following from *Brett's Colonist Guide*, showing the receipts derivable from a wattle plantation of 100 acres during eight years:

Each acre (wattles 10 feet apart) would carry over 400 trees; at the end of fifth year would yield, say, 56 pounds of matured bark. Stripping every third tree, 333 tons would be obtained, which, at £4 ($19.46) per ton, would give for first stripping £1,332 ($6,482.17); sixth year, increase in bark 14 pounds, 400 tons, at £4 ($19.46) per ton, £1,600 ($7,786.40); seventh year, bark increase 14 pounds, 480 tons, at £4 ($19.46) per ton, £1,920 ($9,343.17); yield of bark, eight years, 1,213 tons, at £4 ($19.46) per ton, £4,852 ($23,612.85).

At the time this estimate was made the bark was selling at from £6 ($29.19) to £9 ($43.79) per ton.

AN IMPORTANT INDUSTRY.

With the facts herein set forth it is plain that the planting of the Wattle tree ought to be encouraged in New Zealand and other countries where its growth is assured, but particularly in the United States of America, where there are vast plains containing the soil especially adapted by nature for the growth of this tree of ornament and utility. If forests of these trees were judiciously planted and properly cultured, it would not be many years before handsome returns would be received, besides the grace and beauty that might be given to uninviting and barren wastes.

JNO. TYLER CAMPBELL,
Consul.

UNITED STATES CONSULATE,
Auckland, New Zealand, June 19, 1887.

THE BANANA TRADE OF DEMERARA.

REPORT OF CONSUL BUNKER.

In my opinion there is no more favorable opportunity for the establishment of a steamship line and fruit-growing company by Americans than is presented in this part of tropical America. The profits of such a venture must, in view of the magnitude of the trade, be necessarily large.

British Guiana (embracing the counties of Demerara, Berbice, and Essequibo) is situated on the northern coast of South America. It has a sea-coast line of about 280 miles, by an interior depth varying from 300 to 450 miles from north to south. Its principal rivers are the Essequibo, the Demerara (on which the capital, Georgetown, is built), the Berbice, and the Corentyn, all navigable.

The cultivated districts of the colony lie mostly on the coast lands, and consist of extensive alluvial deposit, composed chiefly of blue clay, impregnated with marine salt, and rich in decomposed vegetable matter. This alluvial flat extends from 10 to 40 miles inland, terminating at a ridge of sand hills. The area of land in cultivation is about 140,000 acres.

The coast lands are well adapted for the growth of cocoanuts, about one million being exported annually, and within 3 or 4 miles from the sea-shore large quantities of the finest bananas may be grown, though none are raised at the present time for export.

I estimate the cost of raising this fruit at less than 8 cents per bunch, and I base my estimate on the price (6 cents per bunch) at which plantains are sometimes sold, this yielding a profit to the seller.

The long yellow plantain bananas grow in large bunches, are finely flavored, and are in every way superior to the productions of Cuba, Jamaica, and the West Indian Islands. They are fully equal to those brought to America from Port Limon and Aspinwall, which are so deservedly popular in our home markets.

The first cost of planting an acre of land in bananas is from $50 to $60, the production being from 600 to 800 bunches to the acre. The plants mature in nine months and the fruit can be gathered every week in the year after it is well started.

In Cuba, Jamaica, Honduras, and Port Limon, bananas are brought to port by railroads, donkey carts (springless), and on the heads of negroes, who throw them down every now and then while resting; consequently the fruit reaches the ship more or less bruised and damaged.

In this colony the principal means of transport is by water; consequently bananas would be delivered at the steamer in better condition than at the places before named.

Central America and the islands where bananas are grown for export are subject to violent hurricanes, that not unfrequently destroy all the plants in its wake, obliging vessels to seek cargoes in other ports; this never occurs on the Guiana coast, as hurricanes do not prevail in these latitudes.

The Atlas line of steamers is said to control the trade between Port Limon and New York; their sailing time averages ten days, the distance being 2,008 miles.

Demerara is about 2,200 miles from New York. A vessel steaming at an average of ten knots would reach the latter port in ten days from here; steaming eleven knots, in nine days, and twelve knots, in eight days.

From Demerara the Gulf Stream is crossed in ten hours, while vessels from Port Limon run for a much longer time in the stream, and it is a well-known fact among shippers that its heat "cooks the fruit."

In certain cases the Colonial Government exempts steam vessels carrying mails from the payment of harbor dues, and it is probable the same courtesy would be extended to a line of banana steamers carrying mails.

Steamers trading here might call at Bermuda and Barbadoes for passengers and mails; a few hours' detention largely increasing the profits of the voyage.

Vessels drawing 18 feet 6 inches can enter the Demerara River at high water.

There were imported into the United States in 1885 bananas invoiced at upwards of $2,000,000. Those received at New York amounted to about $1,100,000; at Boston, $250,000; Philadelphia, $70,000; Baltimore, $125,000; and New Orleans, about $530,000. The cargoes realized in these ports, I am informed, from $1 to $3 per bunch for No. 1's.

A No. 1 bunch has eight hands and upwards; No. 2's, just seven hands; less than that number not rated.

It is highly probable that contracts could be made in the Guianas for large supplies at, say, 20 to 25 cents per bunch delivered alongside.

A vessel of 1,000 tons dead-weight capacity could carry a cargo of 20,000 bunches. It is a well-ascertained fact that the loss on the voy-

age rarely exceeds 15 per cent. Supposing the balance were sold at the low price of $1 per bunch, I estimate the profit on the trip would not be less than $7,000 after payment of all charges. These calculations do not include the profits the steamer would make by the carrying of general freight, passengers, and mails.

An especial advantage for a company growing and shipping its own produce would be in cultivating cocoa. It is well known among planters that the banana furnishes the best shade for young cocoa plants, and it is quite ample up to five years' growth, at which age the tree begins to bear paying crops. The profit on the banana crop would pay the entire cost of cultivation, giving the planters a valuable cocoa estate for nothing.

The banana plants yield an excellent fiber, which, if properly collected and prepared, should go far to pay the cost of estate's labor, and the papaw, lime, orange, mango, guava, and pineapple might with advantage be added to the cultivation.

Further, being in the midst of a sugar-producing colony, a very large and important trade might gradually be developed in preserving and canning fruit, notably the papaw and guava.

It may be well to add a few remarks with reference to the health of this colony, concerning which, according to my experience, many very erroneous opinions prevail both in the States and in Europe, Demerara being constantly spoken of as a hot bed of fever. There is very little variation in the temperature, the thermometer giving an almost uniform reading of 84° Fahr. Sea breezes prevail for the greater part of the year. Cases of yellow fever are comparatively rare and may generally be traced to acts of dissipation or indiscretion.

D. T. BUNKER,
Consul.

UNITED STATES CONSULATE,
Demerara, June 6, 1887.

STEAM FLOUR MILLS IN BRAZIL.

REPORT OF MR. TRAIL.

The proposed establishment of several steam flour mills in Rio having caused some discussion in United States newspapers in regard to their probable effect on the importation of American flour, I have collected a few articles published here, which are herewith inclosed, that are of interest both for the information they convey and in that they look upon the enterprise from different points of view.

As the editor of the *Rio News*, of February 5, says:

> Regarding the production of wheat, it may be considered as an indisputable fact that Brazil will never (or at all events, not for many years to come) figure in the world's market as a wheat producer. Certain localities in the south and in elevated regions may produce a small quantity, but of inferior quality, for flour-making purposes.

The duty of flour per barrel being from sixty-five to seventy-five cents, varying with the rate of exchange, and wheat being admitted free, it is claimed by the promoters of the undertaking that by the use of the best machinery and careful management a large profit can be realized here in flour milling with imported wheat, until such time

as a sufficient quantity of the cereal is grown here to satisfy the home demand.

The companies have not obtained, nor as far as I can learn, have they as yet asked for, any concessions from the Government. It is proposed simply to take advantage of existing tariff regulations and to interest Brazilians to an extent that will insure against the placing of wheat on the tariff list. It naturally follows that if the experiment does not prove successful at the start, a strong pressure will be brought to bear on the Government to have the duty on foreign flour increased. Should these undertakings succeed and so drive out of Brazil American flours, our Government will doubtless render to its millers such assistance as the case calls for. In view of our large and increasing purchases of Brazil's staples, it would seem to be only polite on the part of the Empire to show some slight mark of favor to an American industry threatened with destruction.

Of course these mills, if ever erected, will be an experiment whose success is not by any means assured. I am informed from an intelligent source that the whole affair is simply a gigantic speculation, out of which certain parties expect to reap a rich harvest. But for this I cannot vouch.

CHARLES B. TRAIL.

LEGATION OF THE UNITED STATES,
Rio de Janeiro, May 9, 1887.

No. 1.

[The Rio News, February 5, 1887.]

MANUFACTURING IN BRAZIL.

The almost simultaneous organization of two enterprises for the establishment of flour mills in this city has attracted attention to the question, which we have already discussed, as to whether manufacturing in Brazil is merely an exotic plant, flourishing under the protective influence of our tariff system, or whether it may be a legitimate effort at creating a demand for certain articles to be produced in the country, which have hitherto been imported from foreign countries.

We assert, with little fear of contradiction, that at present Brazil possesses none of the attributes of a manufacturing nation. We do not propose to deal particularly with these milling enterprises, beyond noticing that it is estimated that 30 per cent. profit per annum will be divided, and that so handsome a result will stimulate foreign competition, as more moderate profits are acceptable to American and other mill owners. We merely wish to point out how completely in opposition to accepted opinions in economic matters is this rage for establishing manufacturing industries in Brazil.

J. R. McCulloch, the eminent writer on politico-economical questions, in an essay on the circumstances necessary for the progress of manufactures, divides these into moral and physical. The first are freedom for life and property; an inviolate standard of currency; public burdens fairly and equally imposed; justice speedily, cheaply, and honestly administered, and perfect freedom to testators to dispose of their property. To these he adds education of the working classes. Beyond the first of these attributes—and even this is open to contestation—Brazil possesses not a single one. Of the physical circumstances, Mr. McCulloch places first an abundant supply of raw material, clearly demonstrating that without its immense supply of iron, tin, &c., England could never have assumed its present eminent position as a manufacturing nation. Next comes an ample supply of cheap fuel, without which the steam-engine becomes unavailable, and without steam no manufacturer can compete with others. Skilled labor is another necessity. To this we would add, on our own responsibility, freedom of internal intercourse and moderate or cheap rates of freight. Does Brazil possess any of these physical circumstances declared by Mr. McCulloch to be necessary for the progress of manufacturers? It may be replied that immense water-power is contained in the country, but to avail of this the mills must be so

retired from consuming centers that the excessive freights will nullify any saving gained by using the power Nature has furnished.

All these reasons go to show that at present Brazil has none of the attributes of a manufacturing country, and that if mills are springing up over the country it is under the shade of our excessive import duties.

Whether it is justifiable to establish manufactures to stimulate the production of certain articles, is so variously considered that its examination would occupy more time and space than is at our disposition. Only one point may be alluded to in its application to Brazil. Manufacturers do not pretend to reduce the cost of their products to consumers. These prices will be governed by the current quotations of foreign competing goods, and the result can only be the transferring of so much money from the coffers of the treasury, into which it has been paid as import duties, to the coffers of those interested in these manufacturing enterprises. Brazil can ill afford to see her customs revenue decrease, and that the establishment of every enterprise for the purpose of manufacturing tends to this end seems undeniable.

We have no intention of charging the organizers of these enterprises of doing a wrong to the country; they are merely acting as business men, who, the authorities having declared high duties indispensable, are availing of a perfectly lawful means of securing for themselves a part of the profit.

The treasury may destroy these manufacturers at one blow by increasing duties on the raw material, for the supply of which they are dependent on the stranger, or foreign nations, disgusted with the conceit of the idea of constituting Brazil a manufacturing country, may enter upon a system of reprisals, which must result to the prejudice of the empire.

BRAZIL AS A MANUFACTURER.

The well-worn aphorism that Brazil is a country *essencialmente agricola* is now no longer applicable to this land of slaves and coffee. The rest of the industrial world is asleep, and Brazil is about to strip off the cloak that has hidden for so long her industrial powers and lead the van in the army of manufacturers.

Stimulated with the success of her cotton mills, she is now to turn miller also and prove that Brazilian labor is as cheap and efficacious as that of Europe and the States.

What will the Argentines say to a mill that pays 80 per cent. net on its capital?

Where will the American hide himself when he sees a country that produces neither wheat, coal, nor machinery import all these articles in order that her gifted people may fill their unaccustomed stomachs with cheap bread?

No; when the slopes of the *Serra da Mantiqueira* cease to yield coffee; when the *campos* of Oliveira and Bom Successo are furrowed by the civilizing steam-plow, and the tropic skies look down on a sea of golden grain; when the curse of slavery no longer prevents foreign labor, then may Brazil hope to figure among the bread-supplying countries of the world, and be independent of American, European, and River Plate flour.

In a country which is not yet either a producer of grain or manufacturer of flour, technical knowledge of milling is necessarily rare, and a criticism in figures of Gianelli & Co.'s prospectus would neither be satisfactory nor conclusive; but on general principles where flour can be imported at a selling price of 15,000 reis, after paying duties, commissions, and charges to the extent, say, of 15 per cent. on cost and freight price, the advantage of buying from the national mill is more than apocryphal.

Furthermore, as wheat has to be imported, and consequently pays freight, the only advantage the national concern has lies in the protective duty of about 10 per cent. Against this have also to be imported coals and bags, or barrels, all paying freight likewise, so that where foreign competition only pays freight on the net produce of its mills, the national one has to pay on all the gross requirements for making flour. And, even assuming the easy sale of the major part of the produce of the wheat, where is the home outlet for the collateral products of bran, and so forth?

Without questioning the general exactness of the estimate, as per prospectus, there are a few items deserving explanation.

Expediente d'Alfandega on wheat should be 5¼ per cent. on 2,280,000,000 reis (119,700 milreis not 48,000,000 reis).

The production of bran would largely exceed the demand, say 140,000 milreis against 90,000 milreis required. Second-brand flour would also be produced on far too large a scale for the fastidious taste of this market, the consumption never exceeding about 5,000 barrels per year.

Again, it is not clear about the grinding powers of the mill. Apparently, in order to grind 80 tons per diem, the mill must work the whole of the twenty-four hours.

JANUARY 29, 1887.

Regarding the production of wheat, it may be considered as an indisputable fact that Brazil will never figure in the world's markets as a wheat producer. Certain localities in the South and in elevated regions may produce a small quantity, but of very inferior quality for flour-making purposes. A careful experiment was made near Campinas a few years ago, and the experimenter informed us that the wheat had to be "weeded" by hand two or three times. Think of competing with Russia, United States, or the Argentine Republic, when the Brazilian wheat field must be repeatedly cleaned of weeds by hand!—(EDS. NEWS.)

No. 2.

[News, Rio, February 15, 1887.]

FLOUR MANUFACTURE.*

To the EDITOR OF THE RIO NEWS:

SIR: Knowing, as a frequent reader of your paper, your opinion on the question of native manufactures in this country, the tone of your article in your last number on the simultaneous organization of two new enterprises for the establishment of flour mills in this city did not cause me any surprise.

I am not *periodista*, and all my time is taken up in the management of my business, and I seek to serve, to the best of my abilities, the interest of those who have placed the labor in my hands.

The business man must not necessarily be a man of science, nor has he to be posted in questions of doctrines of economy; but there are, however, certain facts universally acknowledged which are at the reach of all and which can be brought forward in reply to your statements.

Producing countries do not always manufacture their own material, with the exception of those which cannot bear a long voyage, It is for this reason that Australia sends to England her wool, New Zealand her wheat, and the Argentine Republic sends to Europe wool, hides, bones, wheat, &c.

To attack the enterprises "Moinho Fluminense" and "the Rio de Janeiro Flour Mills Company, Limited," because they have to import the prime material, shows a certain (proposital) amount of ignorance and ideas hardly in accordance with the modern age.

It is hard to have to reply to such attacks. You threaten the Brazilian producer with, we do not know what, reprisals on the day when Brazil will get free from the tribute he pays to foreign manufactures.

We believe in a free press, but are surprised to see that amongst distinguished people, and in a country of a spirited race who receive kindly all those who are willing to work honestly, you should think it necessary to run down the interest of enterprises which will bestow benefits on the entire Brazil.

In other words, you would like to defend the manufactures of United States and Argentine Republic to the detriment of the Brazilian public, your attack, being really made on the national industry, and is thus an act of ingratitude to the country n which we are all making a living.

Your assertions offer fair points of controversy, looking at the matter from a poilitical-economist point of view, and though not agreeing with you I quite acknowledge the possibility of your argument as to whether native industry in the abstract is good.

I observe on this count, however, with regret, that you have admitted to your columns an anonymous communication, evidently written by one prompted by personal motives, containing several quite incorrect charges against the statements and figures in my prospectus. I am sorry that you should have allowed an anonymous scribbler, a practice you have so often denounced, who confessedly knows nothing of the matter, to try to damage through your paper the prospects of a bona fide private undertaking. With these preliminaries I will ask the permission to reply in a few words to each of your correspondent's points.

Brazil has, it is true, not yet raised wheat, but is this a reason why it should not do so later? Everything must have a beginning, and if there are capitalists ready to come forward and promote the industry, it seems to me that the press should rather aim to encourage them than admit malicious and erroneous statements calculated to do them harm.

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*This communication is received at the last moment, and we print it just as written, as there remains no time for the author to correct the English, and our position in the controversy does not permit our taking liberties with his manuscript without due authorization.—[EDS. NEWS.]

As for your statement about a trial having been made, and that the weeding had to be done by hand, it seems to me, if you will pardon the word, ridiculous. No dates nor names are given, and probably the attempt was made upon a small scale, and even had your friend wanted to clean the wheat by machinery, where could he get the needful? The necessary machinery can hardly be expected to arrive here in anticipation of the planting of wheat.

He says flour can be imported at a selling price of 15,000 reis per barrel; and so it can, but what sort of flour? Only the very inferior American or Trieste brands could come for this money to-day.

There is a very great advantage to be had over imported flour over and above the duty, which every practical person would know. The very strict custom of allowance for slight damage to flour is a serious percentage on importations, and there are other advantages which would take too long to go into.

Expediente d'Alfandega is quite right, as figured in my prospectus; your correspondent only displays his ignorance by what he puts forward. Government places a valuation of 40 rs. per kilo on wheat, and on this the expediente is reckoned.

Low flour.—Annual importation of low flour to Rio alone far exceeds 40,000 barrels.

Finally, your experienced correspondent makes a point of the mill having to work all the twenty-four hours; he apparently does not know the A B C of milling, viz, that it is relatively cheaper to run a mill twenty-four than twelve hours per diem.

I hope, however, any damage may do in England the tone of your articles among the friends of Brazil, and who may have taken an interest in the flour-mill company which is being organized there, will be dispelled by the answer I now give you.

Asking your indulgence for any mistake or bad grammar,

I remain, yours, truly,

CHARLES GIANELLI.

RIO DE JANEIRO, *February* 12, 1887.

It is to be feared that Mr. Gianelli misapprehends our position in this matter. If he will refer to an article in another column on this subject of manufacturing in Brazil, he will see that our opinions are based, not upon any personal or captious reasons, but upon the broad grounds of expediency and national advantage. We are ready to offer every encouragement that a newspaper can to every industry, whether agricultural or manufacturing, which shows good prospects of being profitable and beneficial to the country; but when we criticise those which are not adapted to the country, and which cannot be successful without legislative protection, it should hardly be claimed that we are ignorant, or that we are opposed to national industries. There seems to us to be but one alternative in this milling enterprise: either the expected profits will not be realized, even in a small part, or the millers will have to ask for additional favors from the Government to protect them against foreign competition. The first interests us only as mistaken employment of capital, diverting it from industries which really need it; but the second interests us as members of the public at large, whose bread will be made dearer in order to protect an exotic industry. Now, to put the case in plain terms, if the projectors of these mills will guarantee the public against any future meddling with tariffs or taxes in their interests, so that bread may not be made dearer, we shall be delighted to see their milling projects tried. As for the wheat-growing experiment mentioned in our last issue, no "dates nor names" were necessary, for the statement was made on our own responsibility. If the good faith of the editor is not sufficient, Mr. Gianelli can apply to Mr. Bevan of São Paulo, who himself made the experiment near Campinas some three or four years ago, and who afterwards stated the results practically, as they were published in these columns. At the same time it might be well to inquire after a similar trial in Theresopolis, which was made about the same period, and which seems to have dropped out of sight. Furthermore, it might be well to inquire why the attempt at wheat-growing ceased in this neighborhood many years ago, and why wheat production in Rio Grande was nearly stopped after having been an article of export for several years.

No. 3.

[Rio News, February 15.]

The question of investing capital in manufacturing industries in this country is one which ought to receive a candid and careful study before further obligations are incurred. It is a matter which deeply concerns the Brazilian people, for much of

their future growth and prosperity depends upon it; and it deeply concerns the investor, because upon its successful issue depend the safety and profitableness of his investment. And in studying the problem every personal question should be laid aside. As a general proposition, we hold that only those industries should be encouraged which are naturally adapted to the soil, climate, and genius of a people, and which can be carried on without bounties, protection, or other extraneous help. We, of course, do not include those industries, such as the manufacture of guns, gunpowder, or other articles necessary for extraordinary emergencies, on which the safety of the state and people may depend. Were a country to encourage the erection of iron furnaces when it had neither iron ore nor coal, no one would deny for a moment that the undertaking would be decidedly foolish. Likewise, were a country to encourage cotton or woolen manufactures without a domestic supply of the raw material and without coal or adequate water-power, that, too, would be considered foolish. But when we have a case where it is proposed to establish a flour-mill, when the country produces neither wheat to grind nor coal to provide the power nor affords water-power near the ports where the grain must be landed, we are asked to believe that it is a praiseworthy undertaking and promises to yield handsome results. Were Brazil a wheat-producer then the excellent water-power of interior localities might be used, and flour-making would yield good results regardless of the absence of coal. But without wheat, coal, and convenient water-power, and without practical experience, what result can be expected? Except within very narrow limits, Brazil is a country which affords very few facilities for manufacturing. Rough cotton fabrics may be manufactured to advantage, but even these cannot exist without the protection of heavy import duties. Take away these duties, and the factories would be crushed out in an instant by foreign competition, and that simply because elsewhere raw cotton is produced more cheaply and the costs of manufacturing are less. As for the finer grades of cotton fabrics, they cannot be produced here except under conditions very burdensome to the people in the shape of excessive protective duties, and that is a step which no advantage gained from domestic industries can justify. Instead of being a cotton manufacturer, nature designed Brazil to be a cotton-producer, and there is just where all public encouragement should be directed. Before seeking to encourage manufactures, the state should seek to effect cheaper production and lower costs of transportation, so that the raw material in Brazil might compete favorably with that of other countries. To encourage manufacturing under existing conditions is beginning at the wrong end of the series. Another good illustration of the error of seeking to establish an industry where the conditions are not favorable may be seen in Brazil's one iron-making establishment. This enterprise was undertaken three-quarters of a century ago, in connection with a mine discovered nearly two centuries ago, and although experienced men have been procured elsewhere and costly machinery of every description purchased, it is even now not self-supporting. No one knows how much money has been wasted upon it, but no one will doubt that it would have purchased all the manufactured iron the country needed many times over. The trouble is that the country lacks coal and the genius for carrying on such an undertaking. Brazil has been richly endowed in certain ways, and it would be very wise if those endowments were generally recognized and utilized. Thus far no country has shown itself able to compete with Brazil in the production of coffee, and in this one industry alone there is a mine of wealth. The country is also highly adapted for the cultivation of cotton, tobacco, sugar, rice, fruits of various kinds, and many other products of the soil. Another inexhaustible mine of wealth lies in rubber gathering. Then, in so large a country there can be cultivated a great diversity of small products, all of which might, under favorable conditions, produce good results. Were intelligent attention given to these instead of running after such will-o'-the-wisps as exotic manufactures, wheat-growing, &c., the country would certainly be the richer and more prosperous for it.

No. 4.

[Rio News. February 24, 1887.]

THE FLOUR-MILL QUESTION.

We have felt very much disinclined to discuss this question further, and should not do so had not Mr. Gianelli's communication, in our last issue, introduced so much of the personal element. Whether in this enterprise, or in any other, there is and has been no personal bias whatever on our part. We have endeavored to discuss these questions on general principles, in which are considered the interests of invest-

ors and of the country. If our statements and deductions are not favorable to the enterprises discussed, then it should be proved, not that we are prejudiced against individuals or the country, but that our information is at fault and our reasoning wrong, or else it must be admitted that we are correct.

In seeking to demonstrate that a business man may not be a "scientist" and still be able to initiate and carry on enterprises of this character, Mr. Gianelli is in one sense right. A business man may know nothing whatever of the science of political economy, in fact may never have seen a book on that subject, and yet he may be just as scientific in his methods and principles, just as exact in his application ot econonic principles as the most learned of political economists. After all, political economy is nothing more than the reduction of sound business methods to terms and classification. Political economy does not teach us to manufacture flour where there are no wheat, coal, and manufacturing facilities, nor does common sense. Mr. Gianelli's "rule of thumb" may do very well in small undertakings where the elements of risk are few and simple. But when he reasons "so many tons of wheat and of coal costs so much, and so much flour is produced which, when sold, yields so much, therefore the result is a profit of 80 per cent.," we have good grounds for denying the result and insisting that the factors used have not been correctly taken. More than that, the problem is not wholly a mathematical one, for which reason the investor is bound to consider factors outside the figures given, and it is to these we have chiefly directed attention.

No. 5.

[Translation from the Diario de Pelotas.]

WHEAT GROWING.

We call the attention of the farmers of the province to the publication which we insert in the place of honor in this journal.

It is of such scope, of such great importance for the agricultural future of our province, that we cannot hesitate to co-operate in making generally known the patriotic desideratum which the authors of that publication propose.

The province produces better wheat than that which we import.

There was a time when its greatest wealth was the export of this cereal; there was no better paying plantation than one of wheat, and for us to regain, if not to exceed, the prosperity of a former time the opportunity is offered our farmers of obtaining, in such quantities as they may need, seed (wheat) of their own choice, subject only to the condition of their returning, after the harvest, a portion equal to what they received.

Farmers have to-day the certainty of a sure and easy sale of all the grain they can raise, whether they wish to be remunerated by the steam-mill of Messrs. D. Borges & Co., established in this city, or by the great steam-mill which will work on a large scale in the capital of the Empire, and whose directors are the initiators of the propaganda to which the publication which we insert in the place of honor of our paper refers.

Farmers, whether on a small or a large scale, ought not to miss the opportunity of providing themselves with excellent seed, and should devote themselves with perseverance to a culture without doubt unsurpassed by any other among us in its promising results.

We call the attention of all our readers to the publication which suggests these lines, and at the same time request them to transmit the news to those who are not aware of it.

It is a benefit which they bestow on the future of our dear province.

Article referred to above.

To the farmers of the province:

Wheat growing on a large scale promises to be developed in this province, destined, by the fertility of its soil and its kind climate, to be the granary of the Empire.

There is already working in this city an important milling enterprise of Messrs. D. G. Borges & Co., and the flours they produce are undeniably of superior quality.

In the capital the important industrialists, Messrs. Gianelli & Co., have just organized a joint stock company with a capital of $2,000,000 to found the "City Mill," with the most perfected machinery, and a production of six hundred and fifty barrels of flour a day of the best qualities.

If the farmers, particularly of this province, understand the rich future which wheat growing offers them, this country will shortly be freed from the enormous

tribute it pays in the importation of foreign flours, and will in its turn be an exporter, going to meet with advantage in the consuming markets the products of the United States, Rio de la Plata, Chili, &c.; for it is proved that not only are the wheats here of better quality but that the harvests also give results superior to those of other countries.

With the object, then, of encouraging and helping the farmers in the development of the culture of good wheats, Messrs. Gianelli & Co. offer seed of the best quality from Australia, New Zealand, United States, &c., on the following terms:

(1) There will be supplied to every farmer, who may desire it, the quantity and quality of seed-wheat he asks for and which suits the quality of the land he ought to plant.

(2) Seed to be delivered in this city free of all expense.

(3) The farmer pledges to return, after the harvest, a quantity of wheat equal to the seed which he may have received.

(4) Should the receiver of seed fail to comply with this obligation, he becomes a money debtor to the equivalent value for the seed which he has received and at the current market price for wheat.

All who desire to be supplied with seed should send their orders by the 15th of May next, so that delivery may be made during the month of June to Messrs. Montero & Co., Padaria Mechanica, Pelotas.

No. 6.

[Trade and Export Journal, March, 1887.]

FLOUR MILLS IN BRAZIL.

Exports of American flour to Brazil, although widely fluctuating from year to year, have, on the whole, been increasing, if we review the past fifteen fiscal years. During the last fiscal year we shipped to Brazil 542,499 barrels, and in the year preceding 674,230 barrels, the maximum having been reached in 1883, when no less than 739,441 barrels left our shores for that country. The following is a statement of our flour shipments to Brazil during three successive quinquennial periods:

	Barrels.
1872–'76	2,458,255
1877–'81	3,031,334
1882–'86	3,224,095

The value of our domestic exports to Brazil the last fiscal year was $6,480,738, and in this amount flour was represented by $2,674,327. On the other hand our imports of leading Brazilian products have increased since 1870, as under:

	1870.	1886.
	Pounds.	*Pounds.*
Coffee	163,413,456	393,056,002
Sugar	24,145,381	223,902,642
India-rubber	5,234,294	17,402,000

Total imports from Brazil.

1870	$35,161,219
1886	41,907,582

Total American domestic exports to Brazil.

1872	$5,852,191
1886	6,480,738

The foregoing figures are so eloquent that further comment is scarcely necessary. Brazil's great staples, coffee and india-rubber, are admitted duty free, so that all of the advantages are on Brazil's side, and, comparatively little as Brazil takes from us in return, one of our leading exports thither is now seriously threatened.

A committee of flour millers from New York, Richmond, and Baltimore, recently returned from a visit to Washington, whither they had gone to look after the interests of the trade with Brazil, report that it is proposed by English capitalists to

build flour mills in Rio de Janeiro, and, under concessions from the Brazilian Government, to import wheat from the Argentine Republic free of duty. Two large companies are at present in course of formation in London. The aggregate capital supposed to be needed is £500,000, in shares of £10; the capacity of the mills is to be several thousand barrels daily.

It is at present only by the closest figuring that our millers are able to sell our product in that country, and if the mills to be built in Rio are granted the advantage of grinding wheat on which no import duty is to be levied, while the duty of 75 cents per barrel on flour sold by American millers is maintained, the natural consequence will be that our flour will be driven to the wall.

Argentine wheat is not quite as good as ours, but it is very much cheaper, and the distance of transportation is only one-fifth as great. The enterprise projected by these English syndicates is precarious, and may prove disastrous; for if at any time the Brazilian Government should feel inclined to take the duty off of flour, or put an equivalent tax upon wheat, the milling machinery would not be worth more than the price of old iron in Rio. That mills of the great size and capacity named will pay in Brazil is very doubtful. Profitable milling is now a science, and only successful when watched very closely and managed very economically; but the American industry can be shut out and the trade lost, even though at the end of two years the English enterprise should collapse entirely and the shares be valueless.

Richmond, Baltimore, New York, and, in fact, the whole country would be affected, so far as milling interests are concerned. Richmond has milled flour for Brazil for one hundred years. All of the facts will be put squarely before the Brazilian Government, and it will be asked by ours either to take off the duty on flour or to put an equivalent duty on wheat.

Not having the treaty of commerce between the United States and Brazil before us, we cannot determine to what extent our Government would be justified in making remonstrances. It seems, however, that the thing is to be thoroughly investigated, and Brazil will no doubt give due consideration to whatever wrong or injustice there might be in thus favoring the subjects of Great Britain to the exclusion of citizens of the United States, and, we may add, of Austria-Hungary, whose flour would also be barred out.

Brazil would certainly not expose her planters, if things came to the worst, to having a discriminating duty levied on Brazilian coffee, and Dom Pedro II. is too much alive to the interests of the coffee-planting regions of his Empire to provoke retaliation to which we might, perhaps, be fully entitled. But however all this may be, our flour millers have done well in stirring at once in a matter so important.

FLOUR IN COLOMBIA.

REPORT OF CONSUL VIFQUAIN.

Forty dollars and more per barrel is the price of flour here along the coast, a great portion of which is customs duties. As a result, the imports of flour from the United States are not what they might be, the laboring classes being unable to use such an expensive article.

I estimate, from figures collected, that where 1 barrel of flour for consumption, say 5 bushels of wheat, is imported now, 8 barrels, or 40 bushels of wheat in the grain, would be imported and consumed if it were manufactured here and sold at "reasonable" rates, *i. e.*, from $5 to $7 for 100 pounds weight. That is to say, if 100,000 barrels are imported from the States for the Colombian market, outside of the Isthmus of Panama, the equivalent of 500,000 bushels of wheat, eight times this amount in wheat, or 4,000,000 of bushels of wheat, would be imported.

To be sure, this is not much in proportion to what our crop generally is in the States; but then it would always be that much, with promise of a large increase in the near future; it might become an immense factor in establishing on this continent a substitute for the

market for wheat that we have lost in Europe, and facilitate perhaps not a little in enabling the fixing of the standard value of silver as a staple in the United States instead of in Great Britain, for the South American States are essentially silver communities. I might also call your attention to the fact that the wheat for this coast can come all the way from Saint Paul, Minn., or Omaha, Nebr., by means of water transportation.

I am led to believe that if parties in the United States were to establish flouring mills at this place, or at Carthagena, all the machinery for these mills, and all the material necessary for their construction, would be admitted free of duty; nay more; I make bold to say that every bushel of wheat needed for these mills would be admitted free of duty; and this is the one great point I wish to make in this report. Unable to create such a market for our flour as we ought to have, we should strive to create one for the raw product.

The consummation of this by American millers would be an entering-wedge, which would be of telling effect between the trade of the United States and Colombia for the future. Concessions by the Government of Colombia can be secured for all this, which will, so to speak, give a monopoly to the United States for the wheat to be used here.

VICTOR VIFQUAIN,
Consul.

UNITED STATES CONSULATE,
Barranquilla, July 6, 1887.

VENEZUELAN NATIONAL COINAGE LAW.

TRANSMITTED BY CONSUL BIRD.

The Congress of the United States of Venezuela decrees:

ARTICLE 1. The coin of the Republic of Venezuela shall consist of gold, silver, and nickel pieces. The kilo of gold, as well as of silver, shall be estimated as divided into one thousand equal parts.

ART. 2. The law for gold shall be 900 thousandths; the law for silver shall be of two classes, one of 900 thousandths and the other of 835 thousandths.

ART. 3. The monetary unit of the Republic shall be the silver bolivar, that shall be estimated as divided into one hundred parts or centimes.

ART. 4. The kilo of gold shall be divided into five sizes for coinage, to wit: one size of 31, one of 62, one of 155, one of 310, and one of 620. Accordingly, each one of 31 parts shall weigh 32 grams, 25.806; each one of 62 parts shall weigh 16 grams, 12.903; each one of 155 parts shall weigh 6 grams, 45.161; each one of 310 parts shall weigh 3 grams, 22.580; and each one of 620 parts shall weigh 1 gram, 61.290.

ART. 5. The kilo of silver of 900 thousandths of law shall be of only one size, of 40 parts and 25 grams weight. The kilo of silver of 835 thousandths shall be of four sizes; one of 100 parts of 10 grams weight each; one of 200 parts of 5 grams of weight each; one of 400 parts of 2 grams 50 hundredths weight each; and one of 1,000 parts of 1 gram of weight each.

ART. 6. According to the terms of article 4 the classes of gold coins will be the following:

The 100 bolivar coin of the weight of 32 grams, 25.806.
The 50 bolivar coin of the weight of 16 grams, 12.903.
The 20 bolivar coin of the weight of 6 grams, 45.161.
The 10 bolivar coin of the weight of 3 grams, 22.580.
The 5 bolivar coin of the weight of 1 gram, 61.290.

ART. 7. According to the terms of article 5 the classes of silver coins will be the following:

The 5 bolivar coin of 900 thousandths of law and 25 grams weight.
The 2 bolivar coin of 835 thousandths of law and 10 grams weight.
The 1 bolivar coin of 835 thousandths of law and 5 grams weight.
The 50 centimes of 1 bolivar coin of 835 thousandths of law and 2 grams, 50 hundredths weight.
The 20 centimes of 1 bolivar coin of 835 thousandths of law and 1 gram weight.

ART. 8. The gold and silver coins shall be of circular form; their margin or edge shall be corded or fluted, and the face shall have a border, and of concave surface towards the center of the coin. The different coins shall have the following diameters:

Gold coins.—The 100 bolivar coin, 35 millimeters; the 50 bolivar coin, 28 millimeters; the 20 boliver coin, 21 millimeters; the 10 bolivar coin, 19 millimeters; the 5 Bolivar coin, 17 millimeters.

Silver coins.—The 5 bolivar coin, 37 millimeters; the 2 bolivar coin, 27 millimeters; the 1 bolivar coin, 23 millimeters; the 50 centimes of 1 bolivar coin, 18 millimeters; the 20 centimes of 1 bolivar coin, 16 millimeters.

ART. 9. The type, weight, law, value, and other specifications of nickel coins will be fixed by special law.

ART. 10. The model of gold and silver coins shall be as follows: On the obverse face they will bear the image of Bolivar, looking to the right, with the inscription "Bolivar Liberator" on the upper part; on the reverse face they will bear the national arms, with the inscription "United States of Venezuela" encircling them; at the base will be inscribed the weight and law respectively of each coin, and beneath the year of coinage.

ART. 11. The coinage of money will be made under the conditions of the present law.

ART. 12. Deviation from standard weight of gold coins will be allowed as follows: One thousandth in the 100 and the 50 bolivar coins; two thousandths in the 20 and the 10 bolivar coins; three thousandths in the 5 bolivar coins.

Deviations from standard weight of silver coins will be allowed as follows: Three thousandths in the 5 bolivar coins; five thousandths in the 2 and 1 bolivar coins; seven thousandths in the 50 centimes of 1 bolivar coins; ten thousandths in the 20 centimes of 1 bolivar coins.

ART. 13. Deviation from legal standard will be permitted as far as two thousandths in all gold coins and the 5 bolivar silver coins; and as far as three thousandths in the silver coins of 835 thousandths legal standard.

ART. 14. There shall be coined 8,323,628 bolivars of silver money of 900 thousandths legal standard, amounting to 3 bolivars and 75 centimes for each inhabitant:

ART. 15. There shall be coined 2,774,542 bolivars of silver money of 835 thousandths legal standard, amounting to 1 bolivar and 25 centimes for each inhabitant: *Provided*, The National Congress shall, in future, fix the quantity of silver money that may be conveniently coined as the greater activity of transactions and the consequent necessities of circulation may require.

ART. 16. The national gold and silver coins emitted under the law of March 23, 1857, and the decree of May 11, 1871, shall continue to circulate as till now, that is to say, with the same value as therein prescribed, to wit: The piece of gold at the value of 25 bolivars; the pieces of silver at the values of 5 bolivars, 2 bolivars and 50 centimes, 1 bolivar, 50 centimes of a bolivar, and 25 centimes of a bolivar: *Provided*, The nickel coins of one and of 2½ cents, coined under resolution dictated by the ministry of hacienda, June 14, 1876, shall continue to circulate at the value of 5 centimes of a bolivar and of 125 thousandths of a bolivar respectively. The national copper cents shall circulate at the value of 5 centimes of a bolivar.

ART. 17. The moneys coined under this law shall be received in all the public offices.

ART. 18. The silver moneys coined under this law, under the decree of May 11, 1871, under the law of March 23, 1857, and under that of March 31, 1879, are obliged to be received by private persons, as follows:

Those of 900 thousandths to the sum of 500 bolivars.
Those of 835 thousandths to the sum of 50 bolivars.
Those of nickel and copper to the sum of 20 bolivars.
These sums shall be receivable in each payment.

ART. 19. Foreign gold coins will circulate in the Republic as if they were merchandise; consequently their price remains subject to the relation existing between supply and demand:

Provided, The importation and circulation of foreign silver coin are prohibited.

ART. 20. The silver bolivar being the national monetary unit, all public or private accounts shall be expressed in bolivars and centimes of bolivar. In the courts, offices of record, and all public offices, no written memorial, writing, obligation, account,

or document of any kind shall be admitted in which the monetary values are not expressed in the new national monetary unit, except in those cases where quotations or references are made or where copies of papers formerly written are introduced.

ART. 21. All counterfeit money, wherever found, will be destroyed, the metal delivered to the discoverer, and the person guilty of the falsification, or his accomplice, will be punished under the penalties established by special laws on the subject.

ART. 22. Perforated, filed, or worn gold coin may be refused from circulation.

ART. 23. Silver coins that are filed, perforated, or worn until they have lost their type on both sides may be refused from circulation.

ART. 24. Those who may refuse to receive lawful money shall be punished in double the amount they may have refused to accept.

ART. 25. The National Executive shall dictate the necessary rules and regulations in order that this law may be punctually executed.

ART. 26. The decree of March 31, 1879, and the resolutions contrary to this law are abrogated.

Given in the Palace of the Federal Legislature, and sealed with the seal of the National Congress, in Caracas, May 27, 1887, year 24 of the law and 29 of the federation.

NICOLAS M. GIL,
President of the Senate.
AGUSTIN AGÜERO,
President of the House of Deputies.
FRANCISCO VARGUILLAS,
Secretary of the Senate.
J. NICOMEDES RAMIREZ,
Secretary of the House of Deputies.

Federal Palace in Caracas, June 2, 1887, year 24 of the law and 29 of the federation.

Execute it and take care of its execution.

GUZMAN BLANCO

Countersigned:
V. IBARRA,
Minister of the Interior.

VENEZUELAN MINING LAW.

The Congress of the United States of Venezuela decrees:

ARTICLE 1. All mines in the Republic are the property of the state in which they are located, and will be administered by the federal executive, being regulated by an uniform system of working, according to the provisions of No. 15 of article 13 of the federal constitution.

ART. 2. Mining matter includes all inorganic, metalliferous, combustible, saline, and calcareous substances, fossil and fertilizing materials, precious stones, and the products of the depths of the seas and territorial waters.

ART. 3. Mines are defined to be masses or deposits that may be found on the surface or in the bowels of the earth, that contain, in veins, pockets, layers, or any other form, precious stones, gold, silver, platinum, mercury, lead, iron, copper, tin, zinc, calamine, bismuth, cobalt, arsenic, manganese, antimony, cupel, plumbago, or any other metallic substance, sulphur, mineral coal, fossil woods, alum, asphalt, phosphates, guanos and other fertilizing substances, natural cements, uranium, bituminous materials, oils and mineral waters, salt and products of the seas and territorial waters, and other substances assimilating to those enumerated, discovered or that may be discovered.

ART. 4. Mines will also embrace quarries that contain slates, grindstones, building rocks, marbles, granite, calcareous stones, gypsum, basalt, kaolin, pyrites earths, and others of this class, whether they may be worked on the surface or in underground galleries.

ART. 5. The Federal Executive is authorized to dictate the regulatory decree of this law.

ART. 6. The laws of mines of May 28, 1885, and any other laws or dispositions contrary to this law, are abrogated: *Provided*, That the abrogation herein contemplated shall take effect from the date of promulgation of the regulatory executive decree.

Given in the federal legislative palace, and sealed with the seal of the national Congress, in Caracas, May 26, 1887, year 24 of the law and 29 of the federation.

NICOLAS M. GIL,
President of the Senate.

AGUSTIN AGÜERO,
President of the House of Deputies.

FRANCISCO VARGUILLAS,
Secretary of Senate.

J. NICOMEDES RAMIREZ,
Secretary of the House of Deputies.

Federal Palace, in Caracas, May 30, 1887, year 24 of the law and 29 of the federation.

Execute it and take care of its execution.

GUZMAN BLANCO.

Countersigned:

MARTIN J. SANAVRIA,
Minister of Fomento.

BASIC SLAG AS A MANURE.*

[From the Newcastle Daily Chronicle, July 22, 1887.]

BY PROFESSOR KINCH, *of the Royal Agricultural College, Cirencester.*

In the year 1879 Messrs. Thomas and P. C. Gilchrist took out a patent for a metallurgical process which was destined to effect a great improvement in the manufacture of steel, and to produce a very efficient manurial agent. Of the known deposits of iron ore in Great Britain, about 85 per cent. are phosphoric to the extent of containing more than one part of phosphorous to one thousand of iron; probably nearly the same proportion of the iron ores of the world are phosphoric to this or a greater extent. In smelting the iron ore to make pig-iron, practically the whole of the phosphorus of the ore remains in the pig. Such pig-iron is not suitable for making steel by the ordinary Bessemer or by the Siemens process, as the phosphorus remains in the steel and renders it "cold short." In making crucible-steel by the cementation process, the phosphorus is removed by puddling or a similar process, but this method of steel-making is only used for a very small proportion of the steel now used. It followed that only about 15 per cent. of the iron ores, mostly hematite, which were nearly free from phosphorus, could be used in steel-making. Pig-iron made from the Cleveland, Staffordshire, Scotland, and similar iron ores contains phosphorus varying from about 0.8 up to 3 per cent. of phosphorus. Such pig-iron can now by the Thomas-Gilchrist basic process be converted readily into first-class steel and ingot iron. The process is most commonly used as a modification of the well-known Bessemer process, though it is also used with the Siemens process of steel-making. Essentially, the procedure is as follows: The "converter" into which the molten cast-iron is run is lined with strongly ignited magnesian limestone, instead of with the usual siliceous ganister. Lime to the extent of about 15 to 20 per cent. of the weight of cast iron is thrown into the converter at the beginning of the "blow." The "blow"—a powerful blast of air forced through the molten metal—is conducted as in the ordinary Bessemer plan, but is continued for about one and a half to five minutes longer than in the ordinary process. The oxygen of air unites with the impurities of the pig-iron; with silicon to form silica; with carbon to form carbonic acid; with manganese to form oxide of manganese; with sulphur to form oxides of sulphur; and, finally, with phosphorus to form phosphoric acid. This phosphoric acid combines with the lime present to form phosphate of lime. A certain quantity of the iron is also oxidized to form ferrous and ferric oxides. When the "blow" is finished, in about fifteen minutes, most of the oxidized substances are found floating on the surface of the steel as slag or "cinder," which is then removed by tipping the converter. This slag forms a dark-colored, vesicular substance, containing an admixture of fragments of steel and separate white crystals of calcium phosphate.

* Transmitted by Consul Jasper Smith, of Newcastle-upon-Tyne. See, also, Consular Reports No. 75, pp. 544, 678, and No. 81, p. 1.

The slag, on being freed from metallic iron and finely powdered, has about the following average percentage composition:

Phosphoric acid	16.5
Lime	49.5
Magnesia	4.5
Ferrous oxide	9.5
Ferric oxide	3.5
Manganese oxide	4.0
Sulphur and sulphuric acid	0.5
Silica	7.5
Alumina, moisture, carbonic acid, vanadium oxide, alkali, &c	4.5
Total	100.0

This percentage of phosphoric acid is equivalent to 36 per cent. of phosphate of lime. By a recent slight modification in the details of working, part of the slag may be obtained containing up to 20 per cent. of phosphoric acid, that is equivalent to 43 per cent. of phosphate of lime. The steel from this process is very free from phosphorus, containing from none to about 0.06 per cent.

Already, in 1882, about half a million tons of steel were made by this basic process, and since then it has greatly extended. The following table shows the amounts made in different countries in 1885 and 1886. In England the chief works using the process are in the Cleveland district at Middlesbrough, and in South Staffordshire at Wolverhampton.

The total make of steel and ingot iron from phosphoric pig by the process during the twelve months ending 31st October, 1886, amounted to 1,313,631 tons, being an increase over the previous twelve months of about 368,314 tons. Of this make no fewer than 927,284 tons were ingot iron containing under 17 per cent. of carbon.

The makes of the various countries for the twelve months ending 30th September, 1885, and 31st October, 1886, respectively, were as follows:

	1885.		1886.	
	Total.	With under .18 per cent. carbon.	Total.	With under .17 per cent. carbon.
	Tons.	*Tons.*	*Tons.*	*Tons.*
England	145,707	70,813	258,466	161,908
Germany and Austria	617,514	424,862	883,859	651,523
France	130,582	62,390	122,711	77,141
Belgium and other countries	51,514	42,118	48,595	36,712
Total	945,317	600,183	1,313,631	927,284

These 1,313,631 tons of steel represent nearly 390,000 tons of slag, containing about 35 per cent. of phosphate of lime.

With the formation of this phosphoric slag arose the question can it be used as a manure and be made to supply farm crops with phosphoric acid? Some rather rough experiments were made in the neighborhood of works producing it, giving somewhat varying results. It was a question whether the phosphoric acid was mainly combined with lime or oxide of iron, in which latter case it was unlikely to have much manurial value; also, it was imagined that the ferrous oxide present might be injurious. It is now known that the phosphoric acid in the slag is combined with lime, and that it is mainly present as tetracalcic phosphate, $Ca_4 P_2 O_9$, as shown by Hilgenstock; and distinct crystals of this phosphate often occur in masses of the slag. That the ferrous oxide is absolutely uninjurious is shown by several experiments, in which one, two, and three tons to the acre of the finely ground slag have been applied without harming vegetation, though equally without doing any more immediate good than a few hundred-weights. The amount of ferrous oxide applied is but a minute percentage of the soil to which it is applied, and it is not in a soluble form. A few experiments were made in 1882, at Cirencester, with slag kindly supplied to me by Bolckow, Vaughan & Co., but no good result was obtained, owing, as we now know, to the slag not being sufficiently finely ground.

Scores of patents were taken out for processes having the object of utilizing the phosphoric acid of the slag mainly for agricultural purposes, but only one of these was actually worked to any considerable extent at Schalke, in Germany, where precipitated phosphate of lime, consisting mainly of dicalcium phosphate, is made, containing about 32 to 33 per cent. of phosphoric acid, equivalent to 70–73 per cent. of ordinary phosphate of lime. This is made by Scheibler's process, treating the slag with hydrochloric acid and precipitating the dissolved phosphate with lime and separating the precipitate with the aid of a filter press. The precipitated phosphate has been used with most excellent results, but its high price prevents its general use. Where the cost of carriage of the phosphate is great, and where hydrochloric acid is very cheap, the process may be economical; but there is now abundant evidence to show that the raw cinder may be advantageously used as a phosphatic manure if only it be sufficiently finely ground. The grinding was at first a stumbling block, as the cinder contains lumps and fragments of steel which cause havoc in ordinary grinding apparatus; but this difficulty is now overcome, and large special machinery for grinding is erected, or in course of erection, in many places on the continent and in this country at Middlesbrough and Wolverhampton. From 1882 onwards numerous field experiments have been made with the ground slag in Germany, and to a less extent in other parts of the continent. Dr. P. Wagner, director of the agricultural experiment station at Darmstadt, has carried out, during the last three years, a very careful and interesting investigation, comprising over 800 comparative experiments on five different soils in pots with barley, oats, mustard, wheat, and flax. In Wagner's 1886 experiments the Thomas-Gilchrist slag in different degrees of fineness was compared with superphosphate, Peruvian guano, bonemeal, and coprolites, and on wheat, flax, oats, and barley.

Taking the average of the results with barley on a sandy loam containing 1.9 per cent. of carbonate of lime, with wheat and with flax on a heavy loam containing 6.5 per cent. of carbonate of lime, Wagner found that taking the value of the phosphoric acid in superphosphate, as measured by increase of crop the first year, at 100, then the phosphoric acid in the finely divided slag is worth 61; in coarsely ground slag it was worth but 13; and in ground coprolites only 9. We do not intend to refer further to continental results, nearly all of which have been favorable. A résumé of the most important will be found in pamphlets by Dr. M. Fleischer, Berlin, 1885; Dr. P. Wagner, Darmstadt, 1887; L. Grandeau, Paris, 1886; and H. and E. Albert, Biebrich, 1887.

We now will give a summary of the principal results obtained in the field with the basic cinder in this country.

The following are results of field experiments made with swedes in 1885 and 1886:

Experiments by Mr. Wrightson and Dr. Munro, in 1885, *at Ferryhill, Durham on a stiff, deep clay, deficient in lime.*

Manuring.	Per acre.	Roots per acre:	
	Cwt.	*Tons.*	*cwt.*
Unmanured		2	7¼
Mineral superphosphate	4	11	17¼
Basic slag	4	13	15

Experiments by Mr. Wrightson and Dr. Munro, in 1885, *at Downton, Wilts, on a light, chalky soil.*

Manuring.	Per acre.	Roots per acre.	
	Cwt.	*Tons.*	*cwt.*
Unmanured		2	16¼
Mineral superphosphate	4	6	1
Basic slag	4	5	11¼

The season 1885 was an exceedingly bad one for root crops, and generally the yield was very low; but at Ferryhill, on the clay, basic slag in small quantity, about 4 cwt. per acre, gave excellent results. On the calcareous soil of Downton larger amounts of slag, about 10 cwt. per acre, gave more favorable returns.

Experiments by Professor Kinch and Mr. Swanwick, in 1886, at the Royal Agricultural College, Cirencester, Gloucestershire, on a calcareous clay resting on the Great Oolite (plots in triplicate).

Manuring.	Per acre.	Roots per acre.	
	Cwt.	*Tons.*	*cwt.*
Unmanured		7	18¼
Basic slag	4	11	3¾
Basic slag	7	11	19½
Basic slag	20	11	8
Precipitated phosphate	1½	11	16¼
Mineral superphosphate	3	12	13½

In another field, on a similar soil, 6 cwt. and 10 cwt. of slag gave results equal to 3 cwt. of superphosphate and an increase of 3½ tons of roots per acre over unmanured land.

Experiments by Mr. T. A. Dickson, in 1886, at Kinnersley, Herefordshire, on a red loam resting on a gravelly subsoil.

Manuring.	Per acre.	Roots per acre.	
	Cwt.	*Tons.*	*cwt.*
Basic slag	5	15	2
Mineral superphosphate	4	13	5

Experiments made by Mr. R. Warington, F. R. S., on Sir J. Lawes's farm at Rothamsted, Herts, a heavy loam resting on clay over chalk.

Manuring per acre.	Roots per acre.	
	Tons.	*cwt.*
15 tons dung and 8 cwt. basic slag	19	14½
15 tons dung and 2 cwt. superphosphate	19	14
15 tons dung and 6 cwt. basic slag	17	16
15 tons dung and 2 cwt. superphosphate	17	5½
15 tons dung and 4 cwt. basic slag	17	2½
15 tons dung and 2 cwt. superphosphate	17	19½
4 cwt. basic slag	9	4
2 cwt. superphosphate	9	4½

Experiments made by Mr. W. Field, jr., at Redbourne, Herts, on a heavy loam in poor condition.

Manuring.	Per acre.	Roots per acre.	
	Cwt.	*Tons.*	*cwt.*
Basic slag	8	12	5½
Superphosphate	6	12	12¾

Experiments on turnips, in 1886, by Dr. J. Aitken, at the Highland and Agricultural Society's Station at Pumpherston; and by Mr. David Wilson, at Carbeth, Scotland (with the same amount of phosphoric acid in superphosphate and in basic slag).

Manuring.	Roots per acre.			
	Average of four plots at Pumpherston.		Average of two plots at Carbeth.	
	Tons.	*cwt.*	*Tons.*	*cwt.*
Without phosphates	9	9	15	8
Superphosphate	11	9	24	19
Basic slag	11	13	23	18

In 1886 an extensive series of experiments was made in the Royal Agricultural College Farm, Cirencester, by Mr. Swanwick and myself on potatoes, the general results showing that 10 cwt. of slag produced very nearly the same effect as 6 cwt. of mineral superphosphate (26 per cent. soluble phosphate). A few experiments have been made with grass. Thus at Downton, in 1885, 8 cwt. of basic cinder produced half a ton of hay increase, being considerably more than the increase produced by superphosphate.

Experiments made by Professor Kinch on grass at the Royal Agricultural College, Cirencester, in 1886 (*plots in duplicate*).

Manuring.	Per acre.	Hay per acre.	
	Cwt.	*Tons.*	*cwt.*
Unmanured	.....	1	2¼
Ground coprolites	3	1	9
Basic cinder	6	1	10¼
Mineral superphosphate	3	1	12¾

These experiments show clearly that this basic slag can supply phosphoric acid to plants. It must, however, be in a fine state of division, and the purchaser must be careful to obtain a guarantee of its fineness, as well as of its contents in phosphate. It can now be bought of such a fineness that the whole of it passes through a sieve with 100 wires to the linear inch, that is, 10,000 meshes to the square inch, and by far the greater part of it through a sieve with 150 wires to the linear inch. This degree of fineness leaves nothing to be desired.

Comparing the effects of ground slag with superphosphate in increasing the yield of land, it appears that in order to produce the same results in the first year a larger dressing of phosphate must be applied in the form of slag than in the form of the soluble phosphate of superphosphate. The results so far indicate that about 5 cwt. of slag gives the same result as 3 cwt. of ordinary mineral superphosphate, or, what is nearly the same ratio, three of slag to two of superphosphate. If 6 cwt. of slag be applied, this contains almost exactly twice as much phosphoric acid as 4 cwt. of common mineral superphosphate, and as the result on the first year's yield is approximately the same, it follows that there is a much larger residue of phosphoric acid left in the soil by the dressing of slag, which residue is presumably slowly available for succeeding crops. The slag has given good results on very different soils and of almost all kinds; probably the best results will follow its application to peaty soils, heavy clays, and perhaps sandy soils poor in lime. On such soils the lime present in a free state may be valuable. On ordinary loams it has given excellent returns, and even on calcareous soils, though probably on these latter superphosphate will always retain a special value as an application for root crops. Generally speaking, the basic slag should be applied earlier in the season than superphosphate, as it takes rather longer to act; thus on pastures it may be used in February or early in March, and for spring corn harrowed in before sowing.

For an ordinary dressing 5 cwt. or 6 cwt. is required, this being, as before indicated, equivalent in its effects to about 3 cwt. or 4 cwt. of ordinary mineral superphosphate.

When used on poor soils or soils in low condition in conjunction with potassic and nitrogenous manures, it is generally advisable to sow it separately and earliest, and not to mix it with the other manures; this, if mixed with kainit and left for a day or two, the mixture becomes hard. It should never be mixed with sulphate of ammonia, as the lime in the slag liberates ammonia from its salt, and loss occurs; when these two manures are applied to the same crop, say to potatoes, the slag should be put on the soil first.

In the above remarks reference has been made only to special manures, and to only a few of these; space has not allowed us to deal with the whole question of general manures, like farm-yard manure, seaweed, and the like. This is not that we undervalue such manures, for, after all, "there's nothing like muck," if only it be judiciously used and there be enough of it; but, notwithstanding that on most farms farm-yard dung has, during the past forty years, tended to become richer in manurial constituents through the increased use of feeding cakes and other concentrated foods, it is on but few farms that special manures, particularly phosphates and nitrogenous manures, can be entirely neglected.

NOTES.

Scarcity of grain in Asia Minor.—Consul Bissinger writes, July 16, 1887, on the drought and distress in Cilicia, province of Adana:

The great suffering from distress and drought in Cilicia, a district in the province of Adana, within this consular jurisdiction, has enlisted the sympathy of the Turkish Government, and by imperial command his excellency the Grand Vizier, it is understood, will take immediate steps, and is now actively engaged in devising the best means for the alleviation of the suffering population, which numbers many thousand souls.

His Imperial Majesty the Sultan, ever ready to come to the rescue of the needy and distressed, is said to have caused orders to be issued to the governor-general of Adana to send daily reports to His Imperial Majesty as to the actual condition of the suffering subjects within his province, and to propose the measures best calculated to relieve the deplorable condition of this unhappy people.

In this connction it is most gratifying to record the many noble, charitable, and unselfish acts of our American missionaries, whose sphere of usefulness is among this afflicted class, to alleviate, as far as it may lie within their power, the distress of those who are suffering from the disastrous effects of the drought.

Dr. Metheny, of Mersine, one of these missionaries, is also a most efficient physician, who, without distinction of race or creed, treats all poor people applying to him for relief, supplying them with medicines procured direct from the United States. In many cases he furnishes food and clothes gratis to the needy applicants, and during the present dearth he is supporting many destitute families, providing clothes and beds for those who are sick and suffering. The Rev. Mr. Montgomery is not behind in this noble example of philanthropy, and is distributing money among the most distressed within his very extensive field of mission work.

The vilayet of Adana is one of the smallest provinces within the imperial Ottoman dominions, its population being approximatively estimated at 250,000 souls. Of these, thousands are said to have been driven by misery to other provinces or to have died from sickness or privation.

Some of these luckless people migrated to the neighboring provinces, and finding no hospitality, for their inhabitants were similarly afflicted, have been compelled to return to their famine-stricken homes in the most wretched and dilapidated condition.

Mortality among cattle and flocks is also greatly on the increase, and the price of a bullock-skin, formerly worth from 50 to 60 piasters, equal to $1.78 to $2.15 United States currency, now scarcely realizes 20 piasters (71 cents).

The rivers that have from time immemorial been navigable by small boats at all seasons of the year have now become so shallow that a man on horseback can cross them and in some places they are even fordable on foot, while the mountain streams are almost entirely dried up; in some parts where water was always in superabundance, there is now scarcely sufficient for drinking and ordinary domestic purposes; such a deplorable condition of things never before, in the memory of any man of the present generation, existed in these otherwise most productive and fertile regions.

In the center and upper regions of the Taurus mountains, inhabited by about 130,000 people, some cereals were grown, and the dwellers of Cilicia, between Mersine and Anamour, upon the failure of the grain crop, had the wisdom to replace it by maize, irrigating their fields from the waters of the rivers that traverse this district.

The Yorooks, who live in tents and only tend their flocks, took refuge in the highest regions of the Taurus, where pastures may be found.

Many thousand people are now believed to be in a state of abandonment and destitution; they inhabit the extensive plain between Mersine and Osmanie, beyond Seihoun, and from the middle elevations of the mountains to the Mediterranean, where almost no rains have fallen for thirteen months and not a vestige of verdure exists.

Field laborers and artisans, tailors, cobblers, masons, carpenters, &c., cannot find employment at any rate, and being unaccustomed to mendicity, may be classed among the greatest sufferers; their savings have disappeared, and the little they are

now realizing from the sale of their furniture, which among that class of people is most scanty, to support their families will soon be exhausted. To these unfortunates the future, indeed, looks dark and disheartening.

It is hoped and expected that the Government will take the subject of irrigation into serious consideration. In olden times the vast plain was entirely irrigated by the rivers that pass through it. The Romans were in the habit of damming out the required quantity from the waters of the Djihoun, Seihoun, and Cydnus, and conduct it to the foot of the mountains from a high level on both sides of the rivers along the surface of the ground, accumulating earth on both sides of its banks, making in this way a wide, high canal, extending from the mountains on both sides of the rivers in various directions to the sea. The farmers had thus the water within their reach and could easily, and at little expense, by means of subsidiary canals, conduct any portion of it to irrigate their lands. Such elevated canals exist to-day in various parts of Europe (France, Spain, and Italy).

These long ancient canals, extending from the foot of the mountains to the sea in all directions, are still extant, and need but to be freed from the rubbish that centuries have accumulated to be again made serviceable. The adoption of this system of irrigation, it is believed, would be far more economical than any other known means of irrigation, and a scheme to carry it into practical execution is, I understand, already on foot with reference to the waters of the river Seihoun—the most important in the vilayet of Adana—if a concession for thirty years can be secured from the Imperial Ottoman Government.

The usual incidents consequent from great distress have not been wanting, and some disturbances and clamor for food are reported to have taken place; but the local government quickly responded to the importunate demands of the famished and formed a council, which decided, pending superior orders, to dole out rations of bread to the famine-stricken sufferers.

But while this action of the local authorities, the generous assistance of the American missionaries, and the proffered succor of the Imperial Turkish Government, as well as of His Imperial Majesty the Sultan, individually is most commendable, it will scarcely be sufficient to reach the wants of all and alleviate every class of suffering. Many well-to-do people (according to the report of one correspondent), and inhabitants possessed of large houses and farms, are actually in want, and everything worth selling is being disposed of at ridiculously and ruinously low prices to procure the necessaries of life, and the continued use of dry bread by these unfortunates as a daily diet has produced much sickness and suffering from gastric complications; but this needs confirmation.

The supply of corn, notwithstanding the exportation of all cereals has been prohibited, is gradually being exhausted, while the flocks are dying through lack of pasturage and water.

The suffering from continued drought is not confined to the narrow limits of Cilicia, but extends far north into Karamania and other parts of Asia Minor; Eastern Persia is also suffering from this vicissitude, and notably the district of Khorassa is greatly afflicted from a dearth of provisions, and a general famine is apprehended; but these provinces are beyond my jurisdiction, and a description of the distress and destitution of their much-to-be-pitied inhabitants must be reserved for an abler pen than mine, and will doubtless be noticed by our accomplished representative in Persia.

Consul H. M. Jewett writes from Sivas, under date June 7, 1887:

The outlook regarding crops throughout Asia Minor is very unfavorable, if not alarming. No rain of any amount has fallen this season. Still worse, in the Euphrates district locusts have made their appearance. Wheat has more than doubled in price, and the price of bread has been raised threefold, which has a very serious meaning to the poor classes of the country. The Government has forbidden the export of grain from Sivas, Tokat, Amasia, and other districts. There is probably old wheat enough to tide over the present season without an actual famine, but not enough to avert hardship and distress to the poor. Owing to the want of railroads and other means of transportation individual districts are liable to suffer for want of grain when others comparatively near have an oversupply. The experience of the famine of 1880 appears to have been thrown away.

Cotton growing in Russia.—Mr. Wurts sends the following translation from the *Journal de St. Petersbourg*, July 10–22, 1887:

Russian commercial men are often accused of want of initiative, of leaving the field open to foreign enterprise. The [Russian] *Gazette de St. Petersbourg*, therefore, notes with pleasure the great activity shown at present by two Russian houses,

one at Nikolsk and the association called "Of Central Asia." These two important houses have assumed the task of establishing plantations of American cotton on Russian territory on a scale which would enable our national industry to entirely emancipate itself from the Liverpool market.

The cotton industry is known to be the most considerable of the Empire. In 1885 it was estimated to have amounted to over 212,000,000 rubles, but progress has been neither constant nor regular. Thus in 1882 Russian cotton goods were produced to the amount of 208,000,000, and in 1884 to only 171,000,000; and this phenomenon cannot be explained merely by the effects of the economical crisis, which was felt equally by most of the other branches of our manufacturing industries. It comes from other causes inherent to the matter; in fact, whilst the woolen and linen manufactures obtain their materials in the country (which has enough of them for the foreign markets also), the cotton manufactures find themselves completely under the dependency of the plantations of the New World, or rather of the cotton market of Liverpool, the most important of Europe.

This market is still without serious rival, the importation from Egypt and Central Asia not yet being great. Therefore our manufacturers are obliged to submit to the frequently enormous variations in the price of cotton at Liverpool; and this endangers the steady development of their production. The only issue from this situation would be to have within the limits of the Empire a cotton of good quality and of sufficient quantity.

This want has long been felt by our commerce. Recently it was proved that cotton raised in Russia is of superior quality. The numerous trials made, not only in the Caucasus and the transcaspian region, but also in Bessarabia, the Crimea, and New Russia, leave no doubt that the cotton-plant of New Orleans grows as well with us as in the Southern States of the American Union. Money and the spirit of initiative have, however, been wanting to give the necessary start to the Russian cotton plantations. In order to meet the requirements of the national industry, it would have been necessary, according to the calculations of M. Koudrine, head of the second of these houses, to sow 500,000 déciatines of land in the transcaucasus, Turkestan, and the transcaspian country. What would contribute to the success of the enterprise is the excess of excellent workmen in those regions, who would willingly work for 20 or 25 kopeks a day. The working of a déciatine of cotton would nevertheless come to 60 rubles, which would necessitate an annual expenditure of about 30,000,000 of rubles for the cost of cultivation. A mean crop of about 15 poods (the pood equals 36 pounds 10 ounces) of cotton could, however, be expended per déciatine; the price per pood being 6 rubles at the place of production; the 7,500,000 gathered per annum would consequently furnish a revenue of 45,000,000 rubles, that is, a plus value of 10,000,000. The prospect of so considerable a profit has resulted in waking up our capitalists, who this year have seriously put themselves to the work.

Already, since 1885, several agents have been sent to America to study cotton-planting on the spot, and to verify at the same time the statistics published by the American trade. This latter received with visible irritation the reports relating to the eventual opening of Russian cotton-growing, and maintained by its organs the thesis that good cotton could only succeed in tropical or semi-tropical countries. In answer to these assertions the experiment of cotton-planting was made in the transcaucasus. It was found that the Russian plantations went ahead of the American plantations. In Florida, Texas, and Arkansas—that is, in three Southern States—sowing takes place between the 15th of April and the 15th of May (new style); the harvest begins at the end of September. In the transcaucasus sowing was finished earlier and the harvest also was accomplished at the time when it had barely begun in Texas and Florida. As to the quality of our product, our cotton showed inferiority in no respect to its American similar, while the cost of cultivation in many localities did not exceed 40 rubles, which, it is seen, is below the estimates of M. Koudrine. The phenomena is in no way surprising, for it is recognized that nowhere are plants cultivated so advantageously, whether from the point of view of quality and quantity or that of cheapness of production, as at the northern limits of their sphere of cultivation. This general law for all plants is applicable as well to cotton as to rye and wheat.

Thanks to the success of these experiments, since this spring vast tracts of land have been planted with this product in the transcaucasus and around Taschkent, and at Bokhara, on the shores of the Amou-Daria, not far from the station of Tshardouï, on the transcaspian railway. The ground devoted to these last plantatations, valued at 1,000,000 rubles, was offered last September to the house of Koudrine by the Emir of Bokhara. M. Koudrine has explored also all the places adapted to cotton-planting in the new possessions of Central Asia, especially in the basin of the Mourgab, which are easy to irrigate. It is known that the house of

Koudrine has agencies at Merv, Askhabad, and Meshed. It has also just sent the first caravan with Russian merchandise to Thibet.

We publish the above information, which we would be happy to see confirmed on all points, without disguising from ourselves that experience alone can bring the necessary elements to confirm or weaken the bright hopes entertained by our cotemporary.

Bremen as a cotton market.—Consul Loening writes, under date July 14, 1887:

Bremen is the future cotton market of the continent. If our merchants would make the exertion, I am sure that an immense cotton trade with Bremen would be the result. The cotton merchants here complain much about the mode of shipment on through bills of lading from inland towns in the United States. In many instances drafts are paid on through bills of lading, and the buyers here sit and wait for their cotton, not knowing by what ship or steamer the cotton is shipped. The railroad companies merely undertake to ship the cotton by a vessel leaving such and such a port for Bremen. Sometimes the merchants are kept waiting for their cotton three months or more, suffering loss of interest on draft, and loss by weight and damage to the cotton so long in transit, and often unprotected in hands of railroad companies.

Many cotton buyers here have repeatedly expressed themselves in my presence as determined not to buy any more cotton on railroad through bills, but rather pay from $\frac{1}{16}$ to $\frac{1}{32}$ cent more and be sure of when and what they can expect to receive; besides the avenue to fraud in the through-bill-of-lading system is great. Cotton importers here complain that on our side we are too careless, not strict enough in classing and transactions, while I believe that here they are too "picayunish," stick too much to trifles, and annoy and disgust our merchants by sending a reclamation for, say, $1 on a lot of 100 bales.

The arbitrations, however, are, I believe, quite fair. It is a shame how cotton is handled at Bremerhaven (port of Bremen). In discharging the cotton it is dumped right in the mud, as there is not enough accommodation on the docks, not enough sheds. I have known cotton to lay a week in the mud and rain until somebody claimed it.

Currant crop of Zante.—Consular Agent Crowe writes, under date June 30, 1887:

In a special report I estimated the total currant crop of Greece at about 126,600 tons, which now proves to be about the total, as against 118,287 tons in 1885, and 129,268 tons in 1884. Prices, as was anticipated, did fall considerably, soon after the new year, which enabled a good quantity of fruit to change hands, and as stocks on this side became lighter, prices again advanced, and a livelier demand ensuing, the whole of the remaining stocks may be considered as bought up at about 18*s.* 6*d.* to 19*s.* per 112 pounds, English, free on board in barrels, for the currant-eating markets, or 46 to 47 per francs 100 kilograms, in bags for the French markets for distillation.

The distribution has been as follows:

To—	Tons.	To—	Tons.
United Kingdom (about)	54,000	Trieste (for South Germany)	2,522
United States	11,750	Australia	277
Canada	1,658	Southern Russia	200
France	43,000		
Belgium, Holland, North Germany	12,656	Total	126,063

Of the quantity shipped to the United Kingdom, a portion (probably 7,000 or 8,000 tons) was forwarded to other countries, including the United States; but the direct shipments from Greece to the United States were 11,750 tons, as compared with 8,283 in 1885, and 10,175 in 1884.

The result, on the whole, has been very gratifying for the growers, who have now every reason to look forward to at least an equal yield this year, as the weather has throughout been favorable for all the crops in this country.

The grain crops in particular are far above the average, and of fine quality, but still very short of the annual requirements,

Duties have been increased on all imports, and they are payable in gold, or 15 per cent. more if in paper. A loan having been concluded by the Hellenic Government, exchange has fallen about 12 per cent.

On currants grown on the mainland, an additional tax of 20 per cent. on the duty is to be levied on their exportation; and on the Ionian islands, 15 per cent. on the ad valorem duty on currants, wine, oil, and soap, when exported.

American trade with Persia.—Minister E. Spencer Pratt writes from Teheran, under date June 21, 1887:

I am constantly receiving letters from merchants and manufacturers in the United States asking to be recommended reliable parties here with whom they can enter into business relations.

This legation knows of none such that it can take the responsibility to so recommend, and, in this connection I personally and officially consider it my duty to state that I am earnestly requested by Persians in the highest positions, who sincerely desire to see the commercial relations between the two countries established on a sound basis, to advise that firms in the United States desiring to enter this market send over their own agent or agents to represent them, and that they, under no circumstances, choose as their representatives foreign or European adventurers on the spot, who, under the pretense of possessing peculiar facilities for doing business and especially for obtaining contracts from the Government, shall, for the purpose of promoting private schemes of their own, seek to obtain the use of the names of the said firms as a sort of guarantee of responsibility. That a lucrative trade can be established between the United States and Persia I am confident, but I am equally confident that to make it successful it must be originated and controlled by our own people at both ends of the line.

Peanuts at Antwerp.—Consul John H. Steuart writes from Antwerp, under date July 14, 1887:

Peanuts, or as they are known in French, *graine d'arrachides*, are imported into Antwerp from Coromandel, Bombay, La Plata, and the coast of Africa.

The Coromandel peanuts are brought from Madras or Pondicherry in sacks, already husked and cleaned. Generally they arrive in a more or less heated condition, and in consequence the oil extracted from them can only be used as machine oil, whilst the cake made from the residue serves only for manure.

The Bombay peanuts also come in sacks ready husked and cleaned. The first arrivals after the new crop are generally in excellent condition and produce an oil sweet and clear, that can be used as salad oil, and the cakes remaining are of sufficiently good quality to serve as food for cattle.

During the last few years, however, large quantities of Coromandel nuts have been sent by rail to Bombay and exported as Bombay nuts; the quality not being so good, the reputation of the latter has suffered thereby.

From La Plata some lots have been received and have given satisfaction, as the oil produced was sweet enough for salad oil, and was also used for the manufacture of artificial butter, and the cakes remaining were of excellent quality.

From the coast of Africa come the peanuts that give the best results. Only a small quantity of them is received here, the greater portion being imported i to Marseilles and Nantes, in France, to be manufactured into salad oil to compete with the olive oil.

The nuts from Coromandel and Bombay arrive in sacks, already husked and cleaned, whilst those from La Plata or the coast of Africa come in the shell and have to be husked or cleaned by the manufacturers.

The peanuts from Coromandel, husked and peeled, yield about 36 per cent. of oil and 72 per cent. of oil cake, making a gain of 8 per cent. in the manufacture. Peanuts from Bombay, husked or cleaned, yield about 38 per cent. of oil and 70 per cent. of oil cake, showing also a gain of 8 per cent. Peanuts from La Plata, in the shell, yield 33 per cent. oil, 47 per cent. oil cake, and 20 per cent. residue matter. Peanuts from the coast of Africa, in the shell, yield 36 per cent. oil, 40 per cent. oil cake, and 20 per cent. residue.

The oil of the Coromandel nuts commands 40 francs per 100 kilograms and the cakes 12 francs. The oil of the Bombay nuts commands 42 francs per 100 kilograms and the cakes 13 francs. The oil from La Plata nuts is worth 60 francs, the cakes 15 francs, and the residue 3 francs, per 100 kilograms. The oil of the coast of Africa nuts is worth 80 francs, cakes 20 francs, and the residue 3 francs per 100 kilograms.

The expense of manufacturing is 3 francs per 100 kilograms for the Coromandel and Bombay, 4 francs for the La Plata, and 5 francs for the coast of Africa nuts.

Special machinery has to be used for the nuts of La Plata and the coast of Africa, so as to husk, peel, and clean them, and the factory can work only in this quality of goods, so as to prevent contact with anything that would interfere with the use of the oil for salad oil, or for the manufacture of artificial butter.

These goods are classed in the customs tariff as oil seeds and as free of duty.

The expense of handling here would be from 25 to 50 centimes (that is, 5 to 10 cents) per 100 kilograms (kilo = 220 pounds), depending upon the manner of sale, whether from the vessel or the dock, or whether from a warehouse. The commission is 1½ per cent. for large quantities.

American peanuts are not known on this market. Possibly they might be introduced, so as to become as popular here as they are at home; and the quality of oil and oil-cake extracted therefrom might rival, if not surpass, that of the African nuts.

The only way to ascertain this is to make a shipment and try the market. I can recommend Mr. P. Roels, of this city, as the agent who would be most useful to them, as he has been to me in giving the above information.

Notes on Ichang.—Consul Jones transmits from Chin Kiang a letter from Rev. U. C. Hart, an American missionary, in which occurs the following passage on the productions of Ichang:

Ichang was opened to foreign traffic ten years ago. This is at the head of steam navigation on the Yangotsz. From the ocean to Ichang is 1,040 geographical miles; from the latter place to Chungking is 360 miles. To ascend these waters to Chungking by native boat, the only conveyance to be had, requires from 20 to 40 days, much depending upon the season and weather. * * * There are some limestone ledges which contain coal of poor quality, which is being mined in ancient fashion. It is drawn out from the pits or seams upon little sleds 3 feet long and 1½ wide. A basket of the same dimensions is fastened to the sled, holding about 150 pounds of coal. A good deal of coal is mixed with dirt and water, and molded into bricks, which are exported. * * * The poppy plants occupy from November fully one-half of the arablel and along the river, and the best land, too—Richtofen says, one-third of the cultivated sloping ground. Wheat, barley, peas, beans, buckwheat, and rape seed occupy the other half. Rice is cultivated in level places, in the hollows, and on the hill tops where a supply of water can be had. The wheat and barley of Eastern Szchuan are superior for China. The products, major or minor, are numerous: maize and tobacco are the chief summer crops, and they grow most luxuriantly. I had never seen more vigorous growths of tobacco. Fruits are varied and plentiful, such as peaches, apricots, cherries, oranges, pumalos, inferior apples, and grapes. Shade trees are abundant—the banyan, cedars, pines, juniper, oak, maple, ash, and bamboo. I saw very few camphors. Trees are not grown to any extent for lumber or firewood in the district, owing to the large supply of coal for fuel and the cheapness of wood from other districts.

Jerked beef in Venezuela.—Consul Bird sends the following from the *Gaceta Oficial*, June 28, 1887:

UNITED STATES OF VENEZUELA, MINISTRY OF FINANCES,
DIRECTION OF CUSTOM HOUSES,
Caracas, June 25, 1887.

Resolved, The President of the Republic, with the vote of the Federal Council, and in use of the authority granted in article 10, law XXIII of the code of hacienda, referring to the tariff of imports, has thought proper to resolve that—

The importation of jerked beef* from abroad is prohibited.

Communicate and publish it.

By the Federal Executive.

FULGENCIO M. CARIAS.

Exposition at Barcelona in 1888.—Consul Scheuch writes:

The muncipality of Barcelona has undertaken to hold an exposition in 1888. The Government has made a subvention of 2,000,000 pesetas (a peseta = 19 cents) for the exposition, and I understand has instructed its ministers abroad to invite the respective foreign governments to be represented at the exposition. The first general meeting, presided over by the mayor of Barcelona, was held on the 23d of this month, when an organization for the "International exposition to be held at Barcelona in 1888" was perfected.

* Carne salada en tasajo.

Produce of the Rio Tinto mines.—Consul Ingraham communicates the following:

Pyrites.—The quantities extracted from the mines were as follows:

Years.	For shipment.	For local treatment.	Total.	Average copper contents.
	Tons.	*Tons.*	*Tons.*	*Per cent.*
1882	259,224	688,307	948,231	2.805
1883	313,291	786,682	1,099,973	2.956
1884	312,028	1,057,890	1,369,918	3.234
1885	406,772	944,694	1,351,466	3.102
1886	336,548	1,041,833	1,378,381	3.046

The average quality of the ore extracted continues to be satisfactory.

The amount of the company's pyrites actually consumed in Great Britain, Germany, France, and the United States was:

	Tons.
1882	272,826
1883	288,104
1884	314,751
1885	354,501
1886	347,024

The continued depression in the chemical trade still keeps the deliveries somewhat short of the estimate warranted by our present contracts.

Copper.—The copper produced during the year was equal to 15,863 tons of 21 cwt., and there were brought to market and realized 16.524 tons, partly of 20 cwt. and partly of 21 cwt.

The following are the quantities of copper produced in various forms at the mines yearly, expressed in the common denomination of metallic copper, viz:

Year.	Quantity.	Year.	Quantity.
	*Tons.**		*Tons.**
1876	946	1882	9,740
1877	2,495	1883	12,295
1878	4,184	1884	12,668
1879	7,179	1885	14,598
1880	8,559	1886	15,863
1881	9,466		

*21 cwt. net.

The copper contained in the pyrites delivered is not included in the above.

The price of Chili bars, which serves as the basis of the company's sales, averaged £3 11*s.* 5*d.* per ton less in 1886 than in 1885.

Crops of Sumatra Tobacco.—The following is from the *Bulletin Consulaire Français* for May and June, 1887, p. 430:

Years.	Bales.	Average price.	Years.	Bales.	Average price.
1870	3,114	$1 20	1878	48,141	$1 26
1871	3,922	1 37	1879	57,470	1 18
1872	6,400	1 30	1880	65,065	1 18
1873	9,238	1 80	1881	82,354	1 15½
1874	12,800	1 51	1882	102,045	1 37½
1875	15,100	1 69	1883	93,509	1 32
1876	29,200	1 50	1884	125,461	1 46
1877	35,747	1 30	1885	194,717	1 41½

Bill for the relief of mining industry in Mexico.—Consul Woessner, of Saltillo, transmits the following corrected official text of the bill above

named, which has passed both branches of Congress and will un doubtedly be made a law by the President's signature:

ARTICLE 1. From the promulgation of this law, freedom from all federal, local, and municipal taxes, with the exception of the stamp tax, will be granted to all coal mines, petroleum springs, iron and quicksilver mines, as well as their products; to native malleable and cast iron in bars, rods, pigs, plates, and rails, and to native quicksilver, the liquid product of the minerals from which it is extracted.

ART. 2. The interior State duties, portage tax, &c., however denominated, shall not be levied on the movement, within the Republic, of gold or silver ore, bullion or coin, or on the circulation of the other metals and mineral products.

ART. 3. Quicksilver, whatever may be its origin, shall be exempt from any tax denominated.

ART. 4. Beyond the coinage tax the mines not excepted in article 1st and their products shall be subjected to but one tax, which shall be placed on the value of the metal or mineral product without allowance for expenses of production, but which, however, shall never exceed 2 per cent. of that value.

ART. 5. The tax specified in the previous article shall be assessed for the State in which the mine is located, or for the Federal Government when located in the federal district, and the amount of such tax shall therefore be fixed annually by the several State legislatures within the limits prescribed, and in cases pertaining to it by the national Congress, attention being given to the condition of the treasury and consideration being had for the protection which should be given to the mining industry.

ART. 6. Reduction works and metallurgical assay offices of every class, when in operation, shall pay to the State in which they are located, or to the federal district, a single tax, which shall not exceed six per thousand on the value of the estate and machinery.

ART. 7. The federation shall receive, as provided, 25 per cent. of the taxes levied by the several States, in accordance with the previous regulations.

ART. 8. Any other tax, except the stamp tax however denominated, on the extract, product, or profit of mine or reduction, on the product or profit of mineral establishments, on the capital invested in mines or mills, shares of stock and bonds, or on any kind of metallurgical offices, on transfer deeds to mines and mills and all stock representing the same, is positively forbidden by this law.

ART. 9. The States are forbidden to charge any tax for the denouncing, possession, or other formalities or operations necessary for the acquisition of mining properties or reduction works, or the organization of stock companies, or the transfer or issue of bonds and stock.

ART. 10. The executive is authorized to make contracts by granting special franchises and concessions, without prejudice to the rights of third parties, to companies who guarantee the investment of capital in mining, the extent of territory granted being considered in connection with the amount of capital to be invested, the nature of the mineral, and the conditions of the locality, in conformity with the following rules:

(A) The duration of the franchises and special concessions shall in no case exceed ten years.

(B) The minimum capital to be invested in prospecting and operating shall be $200,000 within five years.

(C) This capital shall be exempt, during ten years, from all federal tax except the stamp tax.

(D) The maximum number of properties which may be granted in ordinary cases shall be twenty, together or separate, the number being determined by the rules and regulations of the respective department of the ministry of public works in proportion to the capital, quality and quantity of mineral, and conditions of the locality, the owners always enjoying the greatest liberty to work on one or all of the properties with not less than twenty operatives.

(E) Only in case of discovery or re-establishment of mining districts can the number of claims so conveyed exceed, according to circumstances, the number indicated by one-half.

(F) The extent of such properties shall be subject to the requirements of the mining code, except in the case of gold placers, in which case the property shall be considered of irregular yield.

(G) Of the twenty claims mentioned in subdivision D, and the thirty in E, only ten can be located on one vein in the first case, and fifteen in the second, as the maximum, either continuously or separately, unless there be but one vein in the mining district; in which case the whole number may be located upon it.

(H) These properties may be protected by the ministry of public works in cases seriously contested, during the space of two years, a maximum limit that must not be exceeded.

(I) This extraordinary protection can be conceded only once, whatever causes may be alleged, but others can be granted in accordance with the requirements of the mining code now in force, but no protection shall be regarded as a motive for extending the privilege longer than the ten years mentioned in the respective contract.

(J) The ministry of public works will authorize owners of claims, if it may be considered proper to do so, to divide and transfer with previous consent of the ministry the concessions contained in the contracts, always provided that the new companies. mining, shall assume their proportion of the obligations.

(K) All these companies shall enjoy the rights and be subject to the obligations which the mining code prescribes, on the expiration of the time specified in their contracts.

ART. 11. For the term of ten years the industries of pisciculture, grape culture, and silk-worm culture shall be exempt from all federal tax except the stamp tax. For the enjoyment of this exemption said industries shall be subject to the conditions fixed by the respective regulations.

ART. 12. The executive is authorized to contract with the railroads for a reduction of the freight rates on native products destined for exportation, on the following bases:

(A) The executive shall fix in his annual estimate the amount necessary to cover the sum charged by the railroads for services rendered under this head.

(B) The ministries of finance and public works shall dictate two months before the expiration of the fiscal term the necessary measures whereby exporters may avail themselves of the advantages specified.

(C) The exports which shall be entitled to a freight reduction shall be divided into four classes, among which, according to the importance they acquire and the protection they need, the executive shall locate them every year, publishing with due notice the respective classification.

The provisions of this law shall take effect in the different States July 1.

American goods in Gera.—Consular Agent Neuer writes:

The retrogression which the trade in American goods has experienced in this region of late years, while almost all articles exported from this district to the United States show a steady increase, induces me to commend some suggestions to the attention of our traders and manufacturers.

Formerly the canned goods prepared in the United States enjoyed a high reputation throughout this district, so that they were greatly in demand. Their excellent quality, in addition to a comparatively low price, rendered them a favorite article. From reliable sources I can state, however, that the high standard of the respective goods, previously securing an extensive demand and sale, has not been maintained. Aside from the fact that the packing frequently lacked the necessary care, the goods were in many instances of a poor quality. As a consequence, their consumption has, to the disadvantage of our traders, materially decreased, and is at the present time a very limited one. To regain a market which has been lost is one of the most difficult commercial problems. Therefore our merchants ought to exercise, above all, the greatest care and conscientiousness concerning the character of their shipments. The trade with our cheap and excellent products is capable of great extension when conducted in the proper way.

As to our manufactures, many Americans are inclined to suppose that because they have an article of undoubted merit, and generally acknowledged at home, it is an easy matter to sell it in foreign markets, and needed only the transmission of circulars and price lists to attain this object. Comparing, however, the tastes and wants of Americans with that of other countries, this supposition is a very erroneous one. A mechanic in the United States will promptly and unhesitatingly discard a tool he has in use for something better adapted to his requirements. To assume that a German mechanic is equally progressive is a grave mistake. To gain a foothold in foreign markets it is indispensable to enter into a careful study of the needs, tastes, habits, and customs of those desired for customers. Then it is necessary to have agencies established, which are supplied with articles best suited to the wants of the people, and sold at a moderate profit. There may be a drawback to such an undertaking, proceeding from the competition with inferior and cheaper imitations, but as the best proves the cheapest, so our superior articles will be given the preference in the long run.

The people in this country are slow in adopting novelties and distrustful of changes. Besides, it is easy to excite a prejudice against an article of American origin, owing to the limited knowledge of our country, institutions, products, and manufactures. Especially among the governing class and landed proprietors there is a perceptible tendency towards discrediting anything American. Nevertheless,

with energy and perseverance our manufactures will find a ready sale, owing to their superior quality, and once introduced will be as difficult to supplant as were its predecessors.

An absolutely necessary requisite for an American agent in this country is a thorough knowledge of the German language. An understanding of a foreign language to carry on an ordinary conversation is not sufficient for the purpose of successfully introducing our merchandise. It is unquestionably due to the push and persistency of the merchants in this district that they have a firm footing in the United States for their manufactures, and I think if our merchants would apply the same systematic methods they would be equally successful in the promotion of their commercial relations.

Hawaiian Islands.—The following statement shows the domestic exports of the Hawaiian Islands for the first six months, 1887, compared with the first six months, 1886:

Articles.		1887.	1886.	Increase.	Decrease.
Sugar	pounds	152,168,622	160,636,998		8,468,376
Molasses	gallons	36,516	35,480	1,036	
Paddy	pounds	400		400	
Rice	do	6,040,500	3,178,050	2,862,450	
Coffee	do	3,700	4,036		336
Bananas	bunches	30,319	22,449	7,870	
Taro flour	pounds	240		240	
Goat-skins	pieces	7,471	7,654		183
Hides	do	13,633	13,297	336	
Sheep-skins	do	3,471	5,135		1,664
Wool	pounds	6,400	72,180		65,780
Awa	do	5,636	865	4,771	
Betel leaves	boxes	612	164	448	
Tallow	pounds		15,865		15,865

Exports from Horgen.—Consul Rice sends the following statement, showing the value of declared exports shipped from the consular district of Horgen to the United States during the fiscal year ending June 30, 1887:

Articles.	1886.		1887.		Total.
	Third quarter.	Fourth quarter.	First quarter.	Second quarter.	
Articles of art (wood carvings, musical boxes, pictures, &c)	$843 99	$579 00			$1,422 99
Bolting cloth	8,984 54	4,599 00	$4,510 06	$7,504 69	25,598 24
Catholic devotional articles	46,573 37	24,364 78	28,959 40	22,132 93	122,030 48
Cheese	1,329 79	1,337 66	968 33	873 26	4,509 04
Cotton thread	179 80	215 78	225 53	....	620 61
Dye-stuff and medicinal stores	383 76	403 79			787 55
Machinery for weaving, knitting, &c	4,776 17	2 384 32	4,712 13	1,894 29	13,606 91
Silks, in pieces	317,554 11	196,016 14	196,313 33	120,339 56	832,223 21
Silk and cotton goods, in pieces	167,934 29	141,708 46	189,407 21	216,863 49	715,913 39
Straw goods	3,019 43	23,295 03	17,422 33	1,435 03	45,172 43
Wines and liquors	290 67	440 21	221 64	248 34	1,200 86
Whisk	....	540 40	453 55	.....	993 95
Total	551,869 42	395,884 57	445,093 58	372,222 07	1,765,069 64
Aggregate value fiscal years ending June 30—					
1882					2,176,494 29
1883					2,648,749 44
1884					2,599,467 42
1885					2,264,008 39
1886					2,066,336 78

Exports from Crefeld.—Consul Potter sends the following statement, showing the value of declared exports from the consular district of Crefeld to the United States during the quarter of the year ending

June 30, 1887, and for the corresponding quarter of 1886; also the totals for the years ending on same date:

Articles.	Quarter ending— June 30, 1887.		June 30, 1886.		Total for year ending June 30, 1887.	Total for year ending June 30, 1886.
	Marks.		*Marks.*			
Articles of art, oil paintings, &c	2,817 97	$670 67	8,114 40	$1,981 23	$5,419 53	$6,080 60
Buttons and button-stuffs	3,760 70	895 05			3,332 31	10,944 46
Canvas for embroidery	4,429 51	1,054 22	1,534 85	365 29	2,498 92	1,472 08
Cotton goods (mainly cotton velvets)	124,494 64	29,629 72	72,480 54	17,250 37	220,481 41	29,831 72
Chemicals and dyes	22,739 12	5,409 53	23,912 09	5,691 08	16,230 62	25,850 10
Liquors and wines	30,670 75	7,299 64	2,302 10	547 90	22,598 82	20,228 35
Miscellaneous	12,172 18	2,896 96	11,969 14	2,848 65	11,114 49	9,344 91
Plush goods	1,807,677 24	430,227 18	1,298,098 26	308,946 19	1,126,152 86	664,784 32
Paper ware and labels	48,599,32	11,566 64	35,441 39	8,435 05	56,071 81	45,546 68
Raw silk					6,172 88	
Ribbons:						
Velvet			11,977 78	2,850 71	6,991 68	22,518 70
All silk	923 40	219 77	3,712 80	883 65	2,587 64	883 65
Half silk					219 77	
Cotton	2,381 15	566 71			566 71	
Silk goods	82,228 56	19,570 40	78,944 64	18,788 82	120,587 30	105,308 56
Silk and cotton-mixed goods	1,442,654 82	343,351 85	915,369 65	217,976 98	967,611 63	743,826 83
Steel and iron machinery, wire, &c	4,439 70	1,056 65			9,738 24	1,243 75
Velvet goods	2,889,813 53	675,575 38	2,150,338 02	511,779 26	2,906,210 32	2,175,301 07
Woolen goods	1,365 00	324 87	9,214 53	2,193 06	4,760 82	2,971 20
Total	6,431,156 59	1,530,615 26	4,623,900 19	1,100,488 24	5,507,106 76	3,865,586 98
Total during preceding year	4,623,900 19	1,100,488 24			3,865,586 98	
Increase	1,807,256 40	430,127 02			1,641 521 78	

Exports from Wallaceburg, Ontario.—Commercial Agent Worden sends the following statement, showing the value of declared exports from the consular district of Wallaceburg, Ontario, to the United States during the four quarters of the year ending June 30, 1887:

Articles.	Quarter ending— September 30, 1886.	December 31, 1886.	March 31, 1887.	June 30, 1887.	Total.
Apples	$61 00	$135 75	$416 65		$613 40
Breeding animals		107 50	82 50	$513 00	703 00
Beans		66 00			66 00
Cord-wood	33,959 26	23,918 75		16,895 75	74,773 76
Elm logs	28,701 50	14,513 00		38,617 50	81,832 00
Eggs		33 00		570 00	603 00
Furs (raw)				292 50	292 50
Hay (baled)				242 82	242 82
Horses				337 50	337 50
Heading		514 50		648 02	1,162 52
Hoops	236 25	46 80		818 40	1,101 45
Live stock	2,342 50	2,821 50	1,097 00		6,261 00
Lumber (hard wood)	9,922 37	4,156 90	1,465 84	6,400 58	21,945 69
Logs (oak, maple, and hickory)	722 50	366 70			1,089 20
Poultry and live fowl	271 00	539 00		319 00	1,129 00
Round oak, hickory, and elm	145 00	128 00		516 75	789 75
Railroad-ties	628 30				628 30
Staves	19,435 05	5,920 93	7,308 68	29,674 96	62,399 62
Stave and heading bolts	20,557 25	12,579 50		31,268 15	64,399 90
Ship timber	4,815 32	9,966 13	338 15		15,119 60
Settlers' effects	490 50	1,843 00	368 90	150 00	2,852 40
Wheat	5,985 40				5,985 40
Miscellaneous	22 50	63 00		76 00	161 50
Total	128,295 70	77,719 96	11,137 72	127,334 93	344,498 31
Total for preceding year	108,294 34	80,223 26	9,063 85	129,650 07	327,231 52
Increase	20,001 36		2,073 87		17,256 79
Decrease		2,503 30		2,315 14	

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REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 84.—SEPTEMBER, 1887.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1887.

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WEIGHTS, MEASURES, AND CURRENCY MENTIONED IN THESE REPORTS.

Name.	Country.	United States equivalent.
Catty	Corea	1⅓ lbs.
Haikwan tael	China	$1.22
Kantar	Turkey	124.652 lbs.
Kilometer		.6213 miles.
Okes	Turkey	2.833 lbs.
Para	Egypt	$.0011
Piaster	Egypt	40 paras.
Picul	China	133⅓ lbs.
Quintal	Venezuela	101.43 lbs.
Rupee	China	$0.462
Tael	China	$1.0675
Yen	Japan	$.997 gold. .784 silver.

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CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES, ETC.

No. 84.--SEPTEMBER, 1887.

[In continuation of Consular Reports No. 82, August, 1887.]

VENEZUELA.

Report of Consul Plumacher.

As in all other parts of this Republic, much depression has existed during the past twelve months, although Zulia, on account of her favorable position, and perhaps also the superior energies of her citizens, has suffered less than any other section. The ravages of the locusts, the prolonged droughts in many important agricultural districts, and the low prices of native produce in foreign markets have combined to make the past year anything but satisfactory.

COFFEE.

The amount of coffee exported in 1886 exceeded that of any year since my arrival at this port in 1878, there having been shipped to the United States alone 35,581,770 pounds, having a declared value at Maracaibo of $3,466,009.08 United States gold.

As the value of shipments to the United States of all classes of produce amounted for the year to only $3,736,675.58 the importance of the coffee trade is apparent. It may be said indeed to be the life of business, and all industries and schemes of progress depend more or less upon the price of this staple abroad.

Until within the past three months the demand in American and European markets was sluggish, and prices correspondingly low, but the news of the partial destruction of the Brazilian crop has given much activity to business and brisk rivalry among buyers in Venezuela, as much as $15 per quintal having been paid in this city.

The coffee business, however, is very much of a lottery, especially as

the large exporting houses are obliged to make heavy advances in the interior, which may or may not result satisfactorily, according to the uprightness of their debtors, the condition of the crops, and the state of the ever-fluctuating foreign market. The absence of satisfactory telegraphic communication is also a drawback to successful speculation.

At the extreme east of Venezuela there is a line running from a point opposite Trinidad to Caracas, but no attempt has been made to lay a cable from that island to the Venezuelan coast.

Steamers from Trinidad make frequent trips to La Guayra, bringing telegrams a day or two old, which are dispatched by telegraph to Maracaibo. This line, however, although new, is so badly managed that dispatches are frequently from ten to fifteen days on the road between the two cities, a distance of about 300 miles.

Such telegraphic communication is practically without value, and since its establishment has done nothing to benefit the mercantile interests of this section.

CACAO.

The exportation of cacao barely holds its own as compared with that of former years, a fact to be much deplored, as in quality and yield the cacao of the district Perija, a few leagues from Maracaibo, is superior to that produced in any other country of South America.

The shipments for the past year amounted to 126,414 pounds, of a declared value of $27,184.48.

With the opening of the projected railway from this city to Perija these figures will, in a few years, be increased tenfold, as want of facile communication is the only obstacle to the development of that fertile, almost virgin, region.

HIDES AND SKINS.

In hides and skins there is but little change. The United States received of the former 657,799 pounds, and of the latter 173,760 pounds, of declared values respectively of $99,240.89 and $41,762.92.

It is worthy of note that the goat-skins from the district of Coro command in New York nearly 10 cents per pound more than those imported from any other locality.

COPAIBA AND OTHER GUMS.

The forests of this section abound in valuable medicinal herbs and balsams, and, although the exportation is as yet insignificant, their collection will in the future be an important industry. Copaiba alone should yield a large revenue, but the same obstacles to the development of the cacao region militate against any interior enterprises on a large scale. The two great drawbacks are the scantiness of the population and the want of good transit communications. Should improved means of traffic and travel be introduced the former evil would soon remedy itself.

The amount of copaiba shipped to the United States was 23,837 pounds, of a value of $7,011.81.

WOODS.

Fustic and other woods continue to be shipped in large quantities, and vessels from Europe and the United States are constantly employed in this trade.

During the past year the United States received from Maracaibo fustic, cedar, and box-wood of the respective values of $37,734.19, $8,484.85, and $8,878.85.

ORCHIDS AND OTHER PLANTS.

The collection of orchids and other plants, which command fancy prices abroad, is beginning to be a business in this section, and during the last six months a declared value of $8,659.81 was shipped to the United States, in addition to various lots sent to England. As yet it is impossible to say how far this industry may be extended, as the flora of our forests has never been thoroughly investigated; but it is believed that many rare varieties may be found in quantities sufficient to repay careful search.

THE STATE OF ZULIA.

In addition to the returns prescribed by the Department, I beg to inclose certain statistics respecting the section Zulia, which merits special notice, on account of its exceptionally favorable position and its increasing commercial importance.

As a home for immigrants, should the time ever come when the Government of this country recognizes the absolute necessity of attracting foreign labor, and shall be disposed to comply with its manifest duties towards the immigrants, as regards assistance and protection, then this section will be one of the most promising fields for successful colonization. Immense tracts of land lie idle, and the results given by the cultivated areas are surprisingly favorable when the still imperfect agricultural methods and implements are considered.

Much could be written upon the advantages offered by the shores of Lake Maracaibo, and these advantages will one day be utilized to the great profit of all concerned in the development of the natural wealth with which Providence has favored this section.

It is true that there exists certain obstacles to this development which, however, can and will be ultimately removed.

The lake itself is navigable for the largest classes of sea-going vessels in its entire extension, its length being about 120 miles. The bars at its mouth, however, practically close this magnificent sheet of water to the commerce of the world, and vessels of more than 11 feet draught are unable to reach the city of Maracaibo.

For many years the subject of the removal or deepening of the bars has been discussed, but it is only recently that the matter has been considered seriously, application having been made to the National Government for permission to make the preliminary surveys, with a view of determining the feasibility of the project. Should this be carried into execution, the effect upon Maracaibo and the surrounding country will be magical.

There is yet another scheme for giving freer outlet to the productions of this section, but which is attended with multitudinous drawbacks. It is proposed to run a railway from this city to a point on the gulf outside the bar, and thus obviate the necessity of entering the lake. This project, although practicable, is, in my opinion, exceedingly unadvisable for many reasons, not the least of which is the absence of sheltered harbors on the gulf coast.

I abstain from entering into any exposition of the relative merits of the two schemes, believing that in a matter of such vital importance the Government will finally select the more advantageous.

Upon other drawbacks to the successful and speedy development of this section I will also touch but lightly, as it rests with the National Government to remove them at pleasure.

I refer more particularly to the vexatious and complicated customs laws and to the no less complicated import tariff, to understand which thoroughly and without liability to error, which, however innocent, may entail serious consequences, needs long practice and study. It is believed that a complete revision of customs matters is in contemplation, and such a measure would be heartily applauded by every one interested in commercial affairs in Venezuela.

Another drag upon progress has been the granting of monopolies of certain industries, such as the steam carrying trade of the lake and the extraction of various native products. The evil effects of this policy have, however, become so apparent that its continuation is already almost an impossibility.

Of the 23,000 square miles comprised in the section Zulia, about 6,000 are occupied by the lake, leaving nearly 17,000 square miles of habitable territory. The last official census of 1881 gave a population of 73,000 souls, or $4\frac{3}{10}$ to the square mile, but as the city of Maracaibo alone contains nearly 40,000 inhabitants the remainder of the section cannot be credited with an average of more than 2 persons to the square mile.

The local government and people are disposed to do all in their power to develop and utilize the latent wealth of their territory, but the unfavorable financial condition of the country during the past few years has prevented any serious progress.

To the southwest of Maracaibo, and reaching to the Colombian frontier, extends the district of Perija, which must become in the future exceptionally prosperous and important. A large extent of this district is covered with the most valuable timber, and the supply of dye-woods, mahogany, lignum-vitæ, box-wood, &c., is sufficient to fill heavy demands for many years to come. These forests also abound in copaiba, sarsaparilla, and other medicinal herbs and gums which yield a large profit.

In the open country agriculture can be brought to a high state of perfection, and the land is particularly adapted to the cultivation of cacao, which is one of the most lucrative industries. The district also contains unsurpassed grazing lands, with fine natural grasses, and the breeding of cattle is attended with great success.

Mines of excellent coal are known to exist, while in the range of mountains on the western frontier encouraging traces of the precious metals have been discovered. For want of easy communication with the shores of the lake this rich district has languished until now in a state of absolute torpor, although in 1885 the local government ordered surveys to be made with a view of building a railway to its center. The establishment of this line would inaugurate a new era in the industrial history of Maracaibo.

The present scanty population of Perija would rapidly increase, exports would be largely augmented, and local developments would surpass anything previously known in the history of Venezuela.

It is hoped and believed that within the present year some practical steps may be taken towards the realization of this project.

I beg to offer a few hints to our exporters, which I trust may be useful in further extending our trade.

As has been frequently pointed out, South America is now a commercial battle ground. The United States, Great Britain, France, Germany, Belgium, and even more unimportant nations, are all in the field,

and the rivalry, though peaceful, is none the less ardent. The time has long passed when South America would receive and be thankful for any class of manufactures—good, bad, or indifferent.

The very competition among foreign sellers to gain her patronage has made her coquettish and her tastes must be consulted. American manufacturers are slowly learning this lesson, but as yet are behind their European rivals.

I give a case in point, related to me by one of our most repectable importers: Some time ago he received in a consignment from the United States a lot of cotton goods, the pattern and quality of which were very suitable for local sale, but of a width not in favor among the people of this country. The importer wrote to his American correspondents, calling attention to the matter, and promising large orders in case of the desired change of width being made. The answer received was that no change could be made in the routine of the factory, and that if he wished that class of goods of a different width he had better look for it somewhere else.

It may be said that it is only caprice on the part of this people to insist upon apparent trivialities, but it is by the indulgence of these caprices and peculiarities that the Germans have gained such a firm grip upon the country.

Three-fourths of the foreign mercantile capital in Venezuela is German, and as a commercial body German citizens outnumber those of all other foreign nations combined, the secret being careful attention to the most trifling peculiarities of their customers and the presence of branch houses or agents in all localities of any commercial importance.

Another importer informed me that with much difficulty he finally induced his American correspondents to send goods in bales instead of in boxes, a small item apparently, but when it is remembered that duties are high, and are levied on the gross weight being charged upon the box in the same proportion as upon the silks it may contain, it is evident that in the course of a year's importation a considerable loss may be sustained by the heavy duties paid upon pine wood and nails.

Our exporters should also be careful that the quality of goods be uniform. It is not good policy, after having opened an extensive and profitable business, to allow shipments of inferior merchandise, and in this connection I would call special attention to the exportation of kerosene. This article is used throughout Venezuela, and is introduced exclusively from the United States, and formerly, before the trade, which has now become extensive, was so firmly established, the kerosene was of excellent quality. Now the complaint against it is universal. It gums the wick, gives but a dim light, and is too liable to explosion. Within the past year there has hardly been a newspaper in Venezuela which has not published accounts of accidents from this cause.

It is to be noted that this country possesses large petroleum deposits, and that refining is already done on a small scale with excellent results, judging from the samples in my possession.

By the expenditure of a moderate capital Venezuela could readily supply herself and a great part of Colombia with a good quality of kerosene, and should this industry be developed, it is certain that the United States would be shut out, as this Government, in order to protect the enterprise, would either prohibit entirely the introduction of kerosene, or would weight it with such excessive duties as to render its importation impossible.

It should also be considered that marked degeneration in the quality of a single one of our exports affects unfavorably our general commercial reputation.

Examination of this market has impressed me with the idea that our native wines and brandies could be successfully introduced. The quality of these articles now imported from France is execrable and injurious to health. The clarets are heavily charged with logwood, and the brandy, I fancy, contains none of the juice of the grape, and that sold here under the names of well-known manufacturers, with labels and corks marked in due form to attest its excellence, is a drugged, and, for this climate especially, a most pernicious mixture.

I believe that our California products could be introduced at least as cheaply as the foreign abominations with which the market is flooded, and once known their quality would insure a continuous demand.

There should also be more consumption of our preserved fruits, as their superiority is acknowledged.

The French and Italians send to Venezuela large shipments of these goods put up in fancy glass bottles and jars, with artistic labels which attract the eye. Should our manufacturers in that line consult a little more the ornamental, preserving at the same time a high standard of excellence, there might be a much increased demand for their goods.

Finally, I must return to an old and repeated recommendation, and although preaching on the same text may become tiresome, yet I must again call attention to the importance of personal representation of our merchants and manufacturers. One bright agent will do more in a week than can be accomplished by months of correspondence.

Every mail brings numbers of letters requesting the assistance of the consulate in establishing business relations. Many of the writers inclose circulars, all wish to sell goods, and some desire consignments of produce. Occasionally satisfactory results have been thus obtained, but the houses here are for the most part conservative in their ideas, and it is not often that they will be persuaded to step out of their beaten track by means of correspondence.

It is different, however, when they are approached personally, and even in the times of greatest business stagnation no capable commercial traveler has ever left Maracaibo without having reaped some benefit from his visit. The misfortune is that these visits are of very rare occurrence, so much so as to make the presence of an American agent a matter of general remark.

Referring to the return of exports from Maracaibo to the United States for the year 1886, it will be noticed that out of a total value of nearly four millions of dollars, but one item is dutiable, and that one very insignificant in quantity.

The United States, therefore, allowed this large amount of Venezuelan produce to enter free, except a small quantity of wool of the declared value of $708.96.

There is, however, perhaps not a single article of American production or manufacture which is not subject to heavy import duties in this country, and one of our important products, plug tobacco, which could have a ready sale, is forbidden by law to be introduced.

We confer every benefit and receive none, which, to say the least, is but a one-sided bargain.

There is no doubt that a judiciously-framed commercial treaty would have an excellent effect upon the mutual relations of the two countries.

Venezuela, perhaps, would not be inclined to favor absolute reciprocity, but some fairer and more satisfactory arrangement than the present might be agreed to, especially as the United States deserve more commercial consideration than any one of the great trading nations.

In Europe import duties are levied upon coffee, cacao, and other important products of this country, while, as far as the United States are concerned, Venezuela in her export business has the advantage of almost absolute free trade and in her importation of a most exorbitant tariff.

Average yearly number of births in section Zulia.

District.	Legitimate.		Illegitimate.		Total.
	Males.	Females.	Males.	Females.	
Maracaibo	408	380	449	461	1,698
Miranda	62	55	76	77	270
Urdaneta	122	103	33	42	300
Colon	50	47	119	110	326
Guzman Blanco	56	59	86	70	271
Sucre	14	16	99	119	248
Bolivar	53	50	80	79	262
Total	765	710	942	958	3,375

Taking the census of 1881 as a basis, the birth-rate would be about 4 per cent. of the population.

It must not be supposed that the large proportion of illegitimate births implies general immorality, as domestic faithfulness is the rule and infidelity the exception. Although among certain classes the marriage ceremony is frequently dispensed with, yet couples living in this manner have quite as scrupulous ideas respecting their mutual obligations as could be desired in the best-organized society.

Average annual number of deaths in section Zulia.

District.	Adults.	Children.	Total.
Maracaibo	451	389	840
Maranda	48	40	88
Bolivar	54	48	102
Urdaneta	41	43	84
Sucre	63	99	162
Colon	78	84	162
Guzman Blanco	45	26	71
Total	780	729	1,509

The above figures would give a death-rate for the entire sectioon of about 2 per cent. of the population.

Articles supplied by Maracaibo to other sections of Venezuela during a period of one year.

Articles.	Weight.	Value at Maracaibo.	Articles.	Weight.	Value at Maracaibo.
	Pounds.			*Pounds.*	
Bags and bagging	14,335	$2,552 00	Rum	224,270	$9,856 40
Baskets, brooms, &c	10,590	1,889 20	Straw hats	11,385	6,806 15
Coffee	11,077	611 00	Sole leather	22,590	3,983 00
Cocoa	391,675	18,439 00	Starch	140,642	7,164 20
Cocoanuts	8,925	84 80	Samples and miscellaneous	441,027	38,244 00
Cocoanut oil	92,692	6,476 20	Sarsaparilla	575	377 60
Charcoal	45,062	162 50	Sugar	77,170	1,657 40
Cedar and other woods	1,249,832	14,110 40	Skins	4,568	1,892 40
Copaiba	2,945	570 80	Tallow	10,005	740 00
Corn	9,616,372	141,886 00	Trunks	228	20 00
Curare	1,012	610 00	Tobacco in leaf, manufactured	48,862	4,947 60
Feathers	1,455	130 80	Various domestic manufactures	3,502	138 60
Hides	102,297	11,737 00	Wool	250	21 10
Mangrove bark	715,205	1,752 40	Total	13,410,227	279,415 70
Mats	932	28 10			
Molasses	17,290	386 00			
Minor products, fruits, vegetables, &c	118,357	612 80			
Quinia bark	25,030	528 25			

Maracaibo and the section Zulia generally receive but few articles from other parts of the Republic. This region is not only self-sustaining as regards native products and manufactures, but at times, when distress and almost famine were prevalent throughout a great part of Venezuela, Maracaibo was able, after attending to the exigencies of her own population, to send cargoes of grain, &c., to the most distant points of the country.

Statistics of population of the section Zulia according to the census of 1881.

District.	Number of houses.	Inhabitants.		
		Males.	Females.	Total.
Maracaibo	5,758	18,471	21,548	40,019
Guzman Blanco	794	2,501	2,153	4,654
Colon	845	3,561	2,729	6,390
Sucre	1,089	2,929	2,482	5,411
Urdaneta	834	2,521	3,223	5,744
Bolivar	1,032	2,630	3,146	5,776
Miranda	945	2,434	2,831	5,265
Total	11,297	35,047	38,212	73,259

As more than five years have elapsed since the last census the foregoing figures cannot now be considered as entirely accurate. The present population of the section may be estimated at 90,000 souls.

Foreigners resident in the section Zulia.

Citizens of the United States	17
Colombians	246
Spaniards	48
Frenchmen	71
Italians	46
Germans	44
English	57
Dutch	221
Danish	27
Other nationalities	11
Total	788

Public schools in the section Zulia.

Colleges sustained by the National Government	1
Students	500
Schools sustained by the National Government:	
Males	36
Females	17
Students	2,933
Schools sustained by the government of the section:	
Males	12
Females	3
Students	490
Schools sustained by the municipality of Maracaibo:	
Males	7
Females	9
Students	1,616
Total number of establishments of public instruction	85
Total number of students	5,539

In addition to the above there are a number of private schools, both elementary and of a higher class of instruction. Various of these receive assistance from the local government, which also sustains from the funds of the section a class in music and drawing. Night schools for persons of more mature age, whose occupations keep them employed by day, are generously provided for by the sectional authorities. Respecting instruction, the record of Zulia is far more brilliant than that of any other part of Venezuela.

Stock breeding in the section Zulia, Venezuela.

District.	Cows.	Bullocks.	Bulls.	Horses.	Mules.
Maracaibo	10,986	2,595	451	620	204
Guzman Blanco	8,416	1,971	2,696	330	156
Miranda	6,355	3,400	1,086	290	110
Urdaneta	6,000	1,000	2,000	140	100
Sucre	294	65	32	18	2
Bolivar	6,800	700	1,300	154	11
Colon	300	50	60	89	61
Total	39,151	9,781	7,625	1,641	644

District.	Asses.	Hogs.	Sheep.	Goats.	Cheese, marketed.
					Pounds.
Maracaibo	1,886	3,150	7,629	101,428	1,013,325
Guzman Blanco	786	4,187	2,941	5,800	1,007,800
Miranda	500	3,000	500	25,500	492,000
Urdaneta	100	3,000	5,000	19,295	615,000
Sucre	13	1,500	50	50	21,500
Bolivar	200	2,000	300	5,000	66,500
Colon	705	2,684	.....	1,500	90,000
Total	4,170	19,521	16,420	158,573	3,904,625

Value of sheep and goats from $1 to $2.50 each; cows and bulls from $20 to $40 each. Wages paid to stockmen about $4 per month with board, or from 35 to 40 cents per day without board.

State of agriculture in the three principal agricultural districts of Zulia.

Description.	Sucre.	Colon.	Guzman Blanco.	Total.
Squares of land in cultivation :				
Sugar-cane	566	932	83	1,581
Cocoa	92	724	480	1,296
Corn	4,100	3,468	36	7,604
Yucs	431	2,196	189	2,816
Plantains	2,809	2,645	87	5,541
Sugar ..... pounds..	4,289,610	4,320,800	423,300	9,033,710
Molasses ..... gallons..	90,560	134,080	13,280	237,920
Corn ..... pounds..	10,656,000	9,814,560	172,800	20,643,360
Cocoa ..... do....	161,460	984,630	1,433,360	2,579,450
Rice ..... do....	46,000	203,000	.....	249,000
Casabe ..... do....	4,630,000	8,500,000	2,299,000	15,429,000
Starch ..... do....	1,460,000	2,900,150	596,350	4,956,500
Plantains ..... bunches..	3,129,600	5,114,240	168,000	8,411,840

Wages of agricultural laborers from 40 to 60 cents per day, without board. A square of land comprises an extension of 300 feet square, or an area of 90,000 square feet. The three districts above mentioned are the only ones in the section where any agricultural statistics can be gathered. In the remaining districts but little produce is raised for market, the demand for local consumption equaling the supply.

Fisheries of Lake Maracaibo.

District.	Persons employed.	Fish sold annually.	Value.
Maracaibo	358	539,244	$19,785 25
Miranda	580	426,265	12,425 20
Bolivar	170	150,000	3,000 00
Colon	180	1,820,000	29,120 60
Total	1,288	2,935,509	64,331 05

The foregoing data include only the fisheries of the lake. On the sea-coast of the section the business could be made very profitable.

The lake abounds in the fish called the curbina, the sounds of which command an exceedingly high price and are used in the making of gelatine. Thousands of dollars' worth of the dried sounds are yearly shipped to New York, and the industry could be extended almost indefinitely.

Cases disposed of in the criminal court of the section Zulia during a period of one year.

Nature of crime.	Cases.	Nature of crime.	Cases.
Assault and battery	43	Slander	2
Assault with intent to kill	5	Abduction	3
Homicide	5		
Robbery with violence	1	Total	63
Theft	4		

Cases disposed of in the police courts of the city of Maracaibo during a period of one year.

Nature of offense.	Cases.
Drunkenness	139
Disorderly conduct	47
Breach of the peace	149
Minor offenses	280
Total	615

There is at present no section of Venezuela where the law is so generally respected and enforced as in Zulia, and although the foregoing tables may apparently indicate a greater amount of crime than in other places equal in population, yet this is not the case. In many parts of this Republic various offenses are committed with impunity and are passed over in silence which in this section are examined and recorded, the offender receiving due punishment. On paper many sections, no doubt, have a cleaner criminal record than Zulia, but in fact there is no more orderly and law-respecting people in the Republic of Venezuela.

Annual mortality in the city of Maracaibo.

Diseases.	Deaths.	Diseases.	Deaths.
Angina pectoris	27	Hemorrhage	3
Apoplexy	1	Hernia	1
Anæmia	4	Hepatitis	9
Aneurism	5	Lesions	21
Asphyxia	5	Lockjaw	34
Bronchitis	10	Old age	5
Cancer	15	Paralysis	3
Cholera infantum	29	Peritonitis	14
Cerebral affections	78	Pleurisy	4
Diarrhea	16	Phthisis	118
Dysentery	95	Suddenly	5
Dropsy	5	Other diseases	52
Enteritis	38		
Fevers	73	Total	670

Although Maracaibo has a somewhat evil reputation as an unhealthy locality, yet this to a great extent is undeserved.

It is true that foreigners upon their first arrival, unless accustomed to the tropics, must pass the "acclimatation fever," a type of yellow fever; but with proper precautions as to mode of life and constant vigilance in order to detect the primary symptoms of this disease there is no reason why the yellow fever of Maracaibo should prove fatal. It rarely assumes an epidemic form, and once recovered from its effects any foreigner can pass his life here in as good health as in any other part of the world.

It is necessary, of course, to adapt oneself to the climate and avoid excesses, as the constant heat, while productive of no special diseases, necessarily induces lassitude and diminishes the capacity for resistance.

The mortality resulting from other fevers, dysentery, phthisis, &c., is chiefly among the lower classes, whose aliment and general manner of living predispose them to be easy victims of any serious infirmity.

It is to be noted that of the 670 deaths reported above as yearly occurring in Maracaibo, a very large proportion should be credited to the surrounding country, which sends its sick to the city hospital to swell the urban death rate.

It may be safely asserted that foreigners coming to this part of the world are in no special danger if they conform to the most elementary rules of common sense.

Exports from Maracaibo to all ports during the year ending December 31, 1886.

Articles.	Quarter ending Mar. 31.		Quarter ending June 30.	
	Weight.	Value.	Weight.	Value.
	Pounds.		*Pounds.*	
Coffee	8,998,550	$886,502 50	10,078,376	$992,880 55
Cacao	40,925	8,847 00	45,836	9,884 50
Copaiba	9,650	2,883 40	10,808	3,220 35
Dye-woods	3,692,500	17,614 60	4,135,600	19,712 23
Divi-divi	934,175	10,983 60	1,046,256	12,292 20
Fish sounds	8,285	3,785 10	9,268	4,256 04
Hides	164,449	24,810 08	186,184	27,776 21
Quina bark	7,275	1,813 70	8,148	2,016 10
Skins	43,645	10,440 60	48,888	11,703 87
Sugar	111,625	2,835 03	125,020	3,164 12
Straw hats	1,025	3,580 40	1,148	4,004 15
Specie	925	48,836 20	1,036	54,684 02
Wool			15,200	840 33
Woods for construction	1,473,450	9,136 75	1,650,264	10,192 13
Various	101,975	1,057 52	114,212	1,176 25
Totals	15,588,554	1,033,136 48	17,476,244	1,157,803 05

Articles.	Quarter ending Sept. 30.		Quarter ending Dec. 31.	
	Weight.	Value.	Weight.	Value.
	Pounds.		*Pounds.*	
Coffee	8,638,608	$851,040 36	8,278,666	$815,580 45
Cacao	39,288	8,472 30	37,651	8,119 63
Copaiba	9,264	2,760 28	8,878	2,645 18
Dye-woods	3,544,800	16,896 15	3,397,100	16,192 12
Divi-divi	896,808	10,536 10	859,441	10,097 36
Fish sounds	7,944	3,647 90	7,613	3,496 00
Hides	158,872	23,806 40	151,294	22,816 32
Living plants	11,400	3,115 75	22,800	6,230 25
Quina bark	6,984	1,728 20	6,693	1,656 03
Skins	41,904	10,008 50	40,158	9,614 30
Sugar	107,160	2,712 16	102,695	2,599 22
Straw hats	984	3,432 41	943	3,289 31
Specie	888	46,872 10	851	44,859 26
Woods for construction	1,414,512	8,736 21	1,355,574	8,372 16
Various	97,896	1,008 80	93,817	966 18
Totals	14,977,212	994,773 21	14,364,174	956,533 77

RECAPITULATION.

Articles.	Weight.	Value.
	Pounds.	
Coffee	35,194,200	$3,546,003 86
Cacao	163,700	35,323 43
Copaiba	38,600	11,509 21
Dye-woods	14,770,000	70,415 10
Divi-divi	3,736,680	43,909 25
Fish sounds	33,110	15,195 04
Hides	660,799	99,209 01
Living plants	34,200	9,346 00
Quina bark	29,100	7,214 03
Skins	174,595	41,767 27
Sugar	446,500	11,310 53
Straw hats	4,100	14,306 27
Specie	3,700	195,251 58
Wool	15,200	840 33
Woods for construction	5,893,800	36,437 25
Various	407,900	4,208 25
Totals	62,406,184	4,142,246 51

These statistics do not include the articles of Maracaibo production or manufacture shipped to other sections of Venezuela.

In dispatch No. 410 of January 3, 1887, a separate table is inclosed of the quantities and values of said products.

NAVIGATION.

The navigation returns for the year 1886 show a less number of arrivals at Maracaibo than in the preceding year, but the American flag has held its own with a total of fifty-one entrances.

Of European nations, Germany has the best record, while Great Britain, which at one time could claim three-fourths of the foreign tonnage arriving at this port, is represented by five small vessels, two of which are American owned, and trade exclusively with the United States.

Other foreign nations make but an insignificant showing, and this is especially noticeable in the case of Sweden and Norway, whose flags in former years were scarcely ever absent from this harbor.

It is a gratifying fact that almost the sum total of exports from this section to the United States, aggregating a value of nearly $4,000,000, is now carried exclusively in American bottoms, and the American steamship line from New York to different points on this coast is so firmly established that there is no apparent danger of foreign rivalry.

INTERIOR STEAM NAVIGATION.

The interior navigation of Lake Maracaibo and its rivers has been somewhat overdone, as there is not remunerative employment for all the vessels of that class engaged in the trade.

A blow was also given to this business by the granting of a monopoly to one party who, by the terms of his contract, was enabled to claim a certain tariff on goods carried by the lake steamers not belonging to his enterprise.

Of course he was bound on his part to give efficient steam service, which, however, was never done, as but one vessel of exceedingly unsatisfactory conditions was placed on the line, and she after a few trips was disabled and withdrawn entirely, being replaced by no other.

It would naturally be supposed that under these circumstances the owners of other steamers would have been at once relieved from the necessity of paying the royalty, but months elapsed and the contractor, without in any way complying with the terms of his concession, continued to draw a large revenue from the earnings of the energetic and progressive individuals who had established and fostered steam navigation in these waters.

REFUSAL BY GOVERNMENT TO RECEIVE FOREIGN COINS FOR DUES.

The dispatch of vessels with cargoes from foreign ports to Venezuela is at present hampered by the recent Government decree relative to the payment of import duties.

About two months ago a mint was established in Caracas, as previously all Venezuelan money was coined in Europe, but in quantities entirely inadequate to the necessities of trade.

There have always, therefore, been in circulation coins of almost every civilized nation, these being received at a value established by law and admitted by Government in payment of all imposts.

With the recent establishment of the mint, however, and before a single one of its coins had been placed in circulation, a sudden and totally unexpected decree was issued by the Executive that no foreign silver whatever should be received in payment of any public duties.

The effect of this blow can be imagined when it is considered that four-fifths of the circulating medium in Venezuela was composed of silver coins of other countries.

This caused a temporary paralysis of all business and much annoyance, and among the poorer classes absolute distress, as no one was willing to receive any silver other than Venezuelan. The consternation was such that the butchers of this city, in which there is a consumption of from twenty to thirty bullocks daily, refused to slaughter, rather than to be obliged to accept foreign silver in payment, there being little Venezuelan coin in circulation.

The Bank of Maracaibo and the leading mercantile houses showed excellent judgment at this critical period by coming at once to an understanding and agreeing to receive, as usual, coins of all countries, fixing a fair value which would cover the cost of their exportation.

By this means a serious crisis was averted, but according to notices received from Caracas, that city is suffering greatly, as no other silver than Venezuelan is accepted by any one.

The decree referred to was evidently issued in order to clear the field for the exclusive reception of Venezuelan money, but was most unadvisedly premature.

As the mint is small, and the coinage progresses slowly, at least six months' notice should have been given to prepare the country for such a radical change. Another circumstance worthy of attention as bearing upon the interests of navigation is the recent reduction in the wages of the Maracaibo pilots, which has caused much discontent among that body of employés, several of the most capable having been obliged to withdraw after years of service and seek other employment, alleging the impossibility of supporting those dependent upon them with their reduced income.

The present pay is forty pesos per month, with no allowances whatever, or, in United States money, $30.77, which is but a small sum for the decent support of a family in Maracaibo.

The marine statistics of this port will always remain comparatively insignificant as long as measures are not taken to deepen the bar at the entrance to the lake.

Although the record of the past year shows a diminution of maritime activity, it is a matter of congratulation that the United States was fairly represented proportionately, and with the expected increased activity in the exportation to American ports of various classes of valuable woods, it is to be hoped that arrivals of vessels will become frequent.

E. H. PLUMACHER,
Consul.

UNITED STATES CONSULATE,
Maracaibo, January 5, 1887.

LA GUAYRA.

Report of Consul Bird.

This country was discovered by Columbus, July 31, 1498, on his third voyage to the New World The Spaniards, upon entering the lake of Maracaibo, and seeing the Indian villages built on piles over the water, gave it the name of Venezuela, or Little Venice. It was a Spanish province until the year 1821, when, after a long and bloody revolution, headed by General Simon Bolivar, its independence was acknowledged by the mother country.

PHYSICAL GEOGRAPHY.

The country is divided into three distinct zones, viz, the agricultural, the pastoral, and the forest.

The agricultural zone comprises the mountains and valleys between the coast of the Caribbean Sea and the interior range of the Parima Mountains, being about 70 miles wide. The surface presents every contrast of conformation, from high mountains to deep valleys, including high table-lands and hilly and undulating fields. The highlands and mountains are adapted to the cultivation of grain, potatoes, and coffee; the low lands and valleys are suited to the growing of sugar-cane, indigo, cocoa, and cotton. Within this area are comprehended all the sea-ports, the mass of the civilized population, and the chief agricultural interests.

The pastoral zone extends from the Parima Mountains to the Orinoco and Apure Rivers. It consists of extended plains interspersed with high table-lands, and watered by numerous streams that, in the rainy season, inundate the plains for many miles. Here the pasturage is luxuriant and plentiful, and cattle and other animals are reared with the least care and attention. The products of this section are cattle, horses, mules, hides, and deer-skins.

The forest zone, stretching from the Orinoco River to the limits of Brazil, is comparatively an undiscovered country, traversed by great rivers, and covered with limitless forests, abounding with all kinds of birds, beasts, and reptiles. Here the savage, secure as yet from the intrusions of civilization, finds a congenial home. The products of this region consist of india-rubber, copaiba, vanilla, and mahogany.

There are three systems of mountains, as follows:

The Andes, trending from Pamplona in Colombia toward the north-east, one branch of which extends to the peninsula of Goajira, and the other, entering the State of Lara, mingles with the Coast Range.

The Coast Range, parallel with the coast of the Caribbean Sea, and extending from the Gulf of Paria to Yaracuy in the State of Lara.

The Parima Mountains in the interior, traversing the country east and west and forming the southern limit of the agricultural zone.

The country is watered by 1,047 rivers, of which 436 are affluents of the Orinoco River, 230 empty into the sea, 124 flow into the Gulf of Paria, the lake of Maracaibo receives 120, and 22 are tributary to the lake of Valencia. The Orinoco, Apure, Meta, Caura, Negro, and Guarico are the principal rivers of the country. There are only two lakes of any importance; these are the lakes of Maracaibo and Valencia, the former having an area of 2,100 square miles and the latter 66 square

miles. The islands pertaining to the country are few in number, the the largest of which is Margarita.

AREA.

Venezuela contains 439,119 square miles of territory, an area larger than France, Germany, and the Netherlands combined, or about the size of the two States of Texas and California.

POLITICAL DIVISION AND POPULATION.

Prior to the year 1881 the political system of the country consisted of twenty States; but, under the reform of the constitution then decreed, twelve of these States were eliminated from the system. The old States, now called sections, though merged into new ones, retain their constitutions. The system, as now constituted, is as follows:

States, &c.	Sections.	Population.
Carabobo	Carabobo and Nirgua	159, 851
Guzman Blanco	Bolivar, Guzman Blanco, Guarico, and Nueva Esparta	494, 002
Lara	Barquesimeto and Yaracuy	233, 752
Los Andes	Trijillo, Guzman, and Tachira	293, 108
Zamora	Zamora, Portuguesa, and Cojedes	236, 371
Falcon	Falcon and Zulia	187, 051
Bolivar	Apure and part of the Territory of Guayana	54, 422
Bermudez	Barcelona, Cumana, and Maturin	257, 867
Federal District		69, 394
Six Territories		89. 427
Total		2, 075, 245

The population amounts to a little more than four to the square mile; and, in the aggregate, is less than one-half of the population of the State of New York.

SEASONS AND CLIMATE.

Summer and winter are the only clearly marked seasons of the year. The summer, or season of drought, begins in October, or as the sun enters the tropic of Capricorn, and ends with the month of March, during which time there is little rain, the temperature is agreeable, and the winds come from the north and northeast. The winter, or rainy season, begins in April, or as the sun enters the tropic of Cancer, and expires in October, in which period the rains are abundant, the temperature is high and the winds blow from the east to southeast. The general temperature in the warmest season may be stated as follows:

	° Fahr.
From sea level to 1,900 feet	86 to 77
From 1900 to 6,500 feet	77 to 60
From 6,500 to 8,000 feet	60 to 36

At 15,000 feet, perpetual snow.

And to convey a clearer idea of the climate in the various localities of the country, the following table of altitude and temperature of cities has been compiled:

Cities.	Average temperature.		Height above sea.		Population.
	° *Cent.*	° *Fahr.*	*Meters.*	*Feet.*	
Caracas	21.8	71.2	922	3,025	55,638
Puerto Cabello	26.7	80.06	2	6½	17,000
La Guayra	27	80.6	8	26	7,428
La Victoria	23.38	73.90	456	1,496	7,000
Valencia	26	78.8	556	1,824	38,000
Maracaibo	27	80.6	9	30	24,090
Merida	16.14	61.05	1,619	5,303	11,000
Montalban	22.25	72.05	72	236	7,114
Nirgua	21.67	71	763	2,503	2,000
Barcelona	27.45	81.41	13	43	12,000
Carupano	27	80.06	8	26	11,000
Maturin	27.50	81.50	7	23	12,000
Barquesimeto	25.50	77.90	522	1,711	29,000
Ciudad Bolivar	28.23	82.81	57	187	11,000
Rio Caribe	29	84.2	5	16	6,000

The variation of temperatue during the year in the hottest localities is very small, or, say, from 15° to 17° Fahr. From five years of personal observation it may be stated that in La Guayra the temperature ranges from 94° to 77° during the year.

GOVERNMENT.

The Government is a Federal Republic, with a constitution modeled after those of the United States and Switzerland. Its chief provisions are the autonomy of the States, popular elections, obligatory and open suffrage, free speech, free press, religious liberty, security of person and property alike to natives and foreigners, abolition of capital punishment, imprisonment for crime for not more than ten years, no imprisonment for debt, no *ex post facto* law, and immunity from search of houses and private papers.

The legislative power is vested in the senate and house of deputies, these bodies consisting, respectively, of three senators from each State and one deputy for each 35,000 inhabitants, and one for each fraction in excess of 15,000 inhabitants, thus forming a Congress of twenty-four senators and fifty-two deputies, all of whom are elected every four years.

The executive power is exercised by the President, with the affirmative vote of the federal council. He may suspend the execution of a law, but cannot veto it, as this power resides in the States, to which the suspended law must be referred for approval or veto. The term of office of the President is two years, and he is ineligible for a second term of office.

The judicial power resides in the high federal court and the inferior federal court, each consisting of eight justices and all elected by Congress for the term of four years.

THE FEDERAL COUNCIL.

This body is composed of one senator and one deputy from each State, chosen by Congress from its own members, together with one delegate from the federal district, all elected for the term of two years, none of whom can be elected for the next council, and at the expiration of this period the senators and deputies return to their seats in Congress. This council is selected at the opening of the session of Congress, and, after organizing, they elect, from their own number, the President of the Republic. To the President, with the approbation of a majority of

this council, is granted many extraordinary powers, such as to provide for the public defense, to expel individuals, to suspend guarantees, to nominate, appoint, suspend, or remove all public officers, to grant concessions, to administer the public lands and mines, and to organize an army in time of peace.

EDUCATION.

Free public schools were established and compulsory attendance decreed by the President, General Guzman Blanco, on June 27, 1870. From official statistics it appears that for the year 1884 there were 1,240 schools with 77,175 pupils, for the maintenance of which the sum of 2,122,965 bolivars ($309,732.25) was expended.

RELIGION.

The Roman Catholic faith is the religion of the country, although religious toleration is guaranteed by the constitution. There is, perhaps, not a Protestant church in the land; yet it is believed that a church might be established and a congregation, res ectable in character and number, assembled in the city of Caracas.

CHARACTER OF POPULATION.

While there are no statistics from which to determine, with any degree of accuracy, the race or color of the population, yet, from observation and information, it would probably be just to assume that 60 per cent. are Indians and negroes, 30 per cent. are of mixed blood and 10 per cent. are of the white race.

VITAL STATISTICS.

Though only meager information is obtainable, yet enough of official statistics has been collected to give some fair idea of the health, &c., of this immediate section.

In the city of La Guayra, with a population of 7,428 souls, there were in the year 1885 51 marriages, 294 deaths, and 255 births; of the latter, 144 were legitimate and 111 illegitimate children.

In the city of Caracas, with a population of 55,638 souls, there were in the year 1883 239 marriages, 1,843 deaths, and 2,473 births; of the latter, 1,235 were legitimate and 1,238 illegitimate children. In the year 1884, there were 208 marriages, 1,731 deaths, and 2,301 births; of the latter, 1,147 were legitimate and 1,144 illegitimate children. Turning to page 453, sixth annual report bureau of statistics of the State of Indiana, for the purpose of comparison, it is observed that in that State during the year ended September 30, 1884, with a population estimated at 2,056,262, there were 18,762 marriages, 15,368 deaths, and 40,153 births, of which latter 39,580 were legitimate and 573 illegitimate children.

IMMIGRATION.

There is very little immigration to the country. It is estimated that fifteen hundred may have arrived during the past five years, of which amount about one hundred and seventy have come during the year 1886. The official records are not open to public inspection, and hence only an approximate estimate can be given. The chief immigration is from the Canary Islands, the inhabitants of which, having the same religion, character, and customs, and speaking the same language, rapidly assimilate with the native population of Venezuela.

MANUFACTURES.

With the exception of some few and small establishments for manufacturing soap, candles, chocolate, starch, macaroni, shoes and hats, and some tanneries, saw-mills, and iron molders' shops, there is nothing of the kind in the country. Even these can scarcely be said to have attained to the size or importance of manufactories.

MINES.

The richest are the gold mines in the State of Bolivar and the copper deposits in the State of Lara. Gold and silver are also found in the States of Carabobo, Lara, and Bermudez; gold, copper, and kaolin in the State of Guzman Blanco; coal, pitch, and sulphur in the States of Zulia and Bermudez, and petroleum in the State of Los Andes. There is also a pitch lake at the mouth of the Pedernales River, on the Gulf of Paria, that is quite as extensive and valuable as that of the island of Trinidad. All these mineral deposits are as yet undeveloped, except the gold of Bolivar and the copper of Lara.

The gold mine "El Callao," Guayana, State of Bolivar, is, so far as is known, the only important and valuable one, which, from its opening from 1871 to 1884 inclusive, has yielded 76,725,010.80 bolivars ($14,807,926.08). In the latter year the product amounted to the sum of 17,076,190.08 bolivars or $3,295,704.69. While no later statistics can be obtained, yet its reputation is fully maintained.

The copper mine of Aroa, State of Lara, like the "El Callao" mine, is directed by an English company, and the ore is exported to Swansea, Wales. The only available information shows that from 1880 to 1883 inclusive, the product amounted to 75,200 tons of ore of the value of 16,137,951 bolivars, or $3,114,624.54. The yield from October 1, 1883, to September 30, 1884, was 26,261 tons.

In addition to the foregoing it should be stated that there are deposits of guano and phosphates upon the Orchilla and Aves Islands that are being mined by Mr. B. F. Folsom, of Philadelphia, and the products exported to Philadelphia and Baltimore.

THERMAL AND MINERAL SPRINGS.

While little accurate information can be offered with respect to these, yet they are known to exist in the States of Carabobo, Zulia, Bermudez, Guzman Blanco, and Los Andes. The springs of Las Trincheras, near the railway now under construction between Puerto Cabello and Valencia, are reputed to be similar, in all respects, to the Hot Springs of Arkansas; and, in view of their character and the mild winter climate, there is reason to believe that their value is not yet fully appreciated.

FISHERIES.

Along the eastern coast and about the island of Margarita the supply of good fish is abundant, yet beyond the primitive method of hook and line fishing little effort is made to develop the interest. The red snapper, so well known and esteemed in Mobile and New Orleans, is found in great quantity. On the coast of Cumana the choicest Spanish mackerel in inexhaustible supply dwell quite undisturbed in the quiet waters. Mr. Calvin S. Nauss, of Waltham, Mass., who spent a year there inspecting the fishing interests of that section, has testified to the excellence and value of the fishing grounds in that vicinity.

RAILROADS.

The people of the United States justly regard railways as the great agencies of civilization and the prime factor for the development of our internal resources. Their importance, as tending to these results, though long unnoticed or disregarded by the people of Venezuela, is being now more fully appreciated; and the present administration, comprehending their value not only as we esteem them, but also as a means for preserving the tranquillity of the country, is making strenuous efforts to develop an extended and important system of railways. The credit of the Government has been freely offered and liberal concessions have been granted to these enterprises; and it is confidently believed that, with English and French capital already enlisted, the era of railroads is about to be auspiciously inaugurated.

The present railway system of the country embraces the Bolivar Railway, from the port of Tucacas to the copper mines of Aroa, in the State of Lara, about 90 kilometers or nearly 56 miles long, and the La Guayra and Caracas Railway, about 38 kilometers or nearly 25 miles long. An important road from Puerto Cabello to Valencia, about 33 miles long, is now in course of construction, with every prospect of early completion. Two short lines now in operation, connect Caracas with the small adjacent towns of Petare and El Valle.

Concessions have been granted to European capitalists for the construction of railway lines, as follows:

From Puerto Cabello, via Taria, San Felipe, Yaritagua, Urachiche, and Chivacoa, to Araure and Bruzual.

From Maracaibo to Cojoro, on the Caribbean Sea.

From Merida to Mucuchies, Bobures, or other points on the western limits of Venezuela.

From the Orinoco River to Guicipata, in the gold region of Guayana.

From Encontrados to La Fria.

In view of the favorable terms extended to the contractors by the Government, there is good reason to hope that the construction of part, if not all, of these lines will be promptly undertaken.

TELEGRAPHS.

The telegraph system is owned and operated by the Government, and consists of seven lines, the principal of which connect the city of Caracas with La Guayra, Barcelona, Carupano, Güiria, Cumaná, Ciudad Bolivar, La Victoria, San Fernando de Apure, Valencia, Maracaibo, and San Antonia del Tachira, at which latter point connection is made with the wires of Colombia. Dispatches are wired to any point at the rate of 20 cents for ten words.

CURRENCY.

A mint for the coinage of Venezuelan gold and silver has been recently erected in the city of Caracas. As soon as it was ready to begin operations, the President issued a decree prohibiting the payment of public dues in foreign silver coin, in consequence of which this sort of coinage, that formed the bulk of the silver currency of the country, has been generally discredited and driven out of circulation. It is believed to be a question of a short time only when, after accumulating a sufficient amount of Venezuelan gold coin, a similar decree with respect to foreign gold coin will be promulgated, and this class of currency, that is to-day the chief gold circulation, will also promptly disappear.

Another decree of the Executive, lately issued, directs the collection of a duty of 125 bolivars per kilogram, or $24.12½ per 2.2046 pounds avoirdupois upon the export of gold bullion, which, it is presumed, will prevent the exportation to England of the product of the gold mines of Guayana, and necessitate the coinage of the same into Venezuelan money.

TARIFF CHANGES.

Amongst several recent modifications of the tariff on imports that have been duly reported to the Department of State, the most important, as affecting American interests, is that decreed upon the importation of lumber. By the terms of the decree, square logs, suitable for sawing into plank, are dutiable at the rate of 19.3 cents, American gold, for 22.046 pounds avoirdupois, and undressed planks are taxed at the rate of 19.3 cents, American gold, for 8.818 pounds avoirdupois. These rates of duty practically close the ports against our lumber.

CONDITION OF CROPS.

The favorable condition of the crops, as reported October 8, ultimo, is still fully maintained, and the harvest of coffee, cocoa, corn, sugar, beans, &c., will be abundant.

TO IMPROVE OUR TRADE.

This question has been treated by the consular officers of the United States from every point of view. Discarding many minor details that may contribute, in some degree, to that end, it may be suggested that the United States of America chiefly needs an adequate mercantile marine that, aside from competing with the large number of European steamships that regularly frequent these waters, shall place the country in direct communication with these South American ports. A line of steamships between Venezuela and the United States was established in 1880, and the steady and gratifying increase of our trade since that time, as is witnessed by personal observation, as well as by statistics from the United States Treasury Department herewith transmitted, seems to warrant the belief that this is the chief factor for the extension of our trade. As another important means to that end, we should have commercial travelers of tact and intelligence, speaking the Spanish language, and engaged with reference to their talking and selling abilities. When these needs are supplied, the question of how to increase our trade will answer itself in a satisfactory manner. But it seems useless to hope for these things until the period of permanent overproduction in the United States has arrived.

IMPORTS.

The impracticability of obtaining a detailed statement of the amount and value of imports by countries at this port for the year ended December 31, ultimo, has been fully explained to the Department.

EXPORTS.

The declared value of exports to the United States from this consular district for the calendar year just closed, together with an exhibit of exports to all countries from the port of La Guayra for the same period, is hereto appended.

NAVIGATION.

The usual return of navigation at the port of La Guayra for the calendar year 1886 is also inclosed.

In the annexed returns, the weights are given in pounds avoirdupois and values are stated in United States currency.

WINFIELD S. BIRD,
Consul.

UNITED STATES CONSULATE,
La Guayra, January 10, 1887.

Declared value of exports from the consular district of La Guayra to the United States during the four quarters of the year ended December 31, 1886.

Articles.	Quarters ending—				Total.
	Mar. 31.	June 30.	Sept. 30.	Dec. 31.	
Cocoa	$7,454 31	$20,184 40	$8,613 29	$5,844 51	$42,096 51
Coffee	494,276 24	287,203 17	124,593 73	90,100 36	996,173 50
Hides	38,452 06	33,930 57	20,002 22	12,919 46	105,304 31
Skins	11,453 67	18,903 54	9,622 27	4,280 23	44,259 71
Sundries	2,426 23	5,592 45	4,171 14	2,787 36	14,977 18
Total	554,062 51	365,814 13	167,002 65	115,931 92	1,202,811 21
Total for 1885	571,431 20	521,306 85	157,331 84	121,115 23	1,371,185 12
Increase			9,670 81		
Decrease	17,368 69	155,492 72		5,183 31	168,373 91

Exports from the port of La Guayra for the calendar year 1886.

Articles.	England.		France.		Germany.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Cocoa	509,924	$78,472 45	4,858,718	$708,481 19	856,566	$124,574 17
Coffee	1,264,232	123,145 00	3,670,917	369,122 15	8,871,590	865,507 92
Hides	8,829	1,236 74	3,697	518 01	165,502	21,774 45
Skins					8,219	2,099 26
Specie			4,927	71,555 14	562	28,070 69
Sundries	116,841	10,078 85	66,418	4,142 75	193,696	15,867 50
Total	1,899,826	212,933 04	8,604,677	1,153,819 24	10,096,135	1,057,893 99
In 1885	1,924,730	205,514 89	9,605,423	1,154,442 24	7,595,549	875,054 08
Decrease				623 00		
Increase		7,418 15				182,839 91

Articles	United States.		Other countries.	
	Pounds.	Value.	Pounds.	Value.
Cocoa	119,105	$18,026 20	773,411	$116,095 29
Coffee	10,338,965	1,001,769 20	933,091	90,480 33
Hides	631,406	87,704 02	767	107 31
Skins	165,479	39,324 33		
Specie	174	28,607 42	48	10,006 47
Sundries	68,332	5,344 94	73,740	610 46
Total	11 3'8 461	1,180,776 11	1,781,057	217,299 86
In 1885	12,219,633	1,336,276 14	2,006,640	256,135 51
Decrease		155,500 03		38,835 65

Exports from the port of La Guayra for the calendar year 1886—Continued.

RECAPITULATION.

Articles.	Total.		Total in 1885.	
	Pounds.	Value.	Pounds.	Value.
Cocoa	7,117,724	$1,045,649 30	4,916,305	$814,622 32
Coffee	25,078,795	2,450,024 60	26,280,721	2,575,819 11
Hides	810,201	111,340 53	1,226,066	136,686 17
Skins	173,608	41,423 59	356,721	88,986 32
Specie	5,711	188,239 72	1,106	160,612 47
Sundries	514,027	36,044 50	621,056	50,696 47
Total	33,700,156	3,822,722 24		
In 1885			33,351,975	3,827,422 86

Navigation at the port of La Guayra for the calendar year 1886.

Flag.	From or to—	Entered.				Cleared.			
		Steamers.		Sailing vessels.		Steamers.		Sailing vessels.	
		No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
American	United States	31	40,120	3	1,083	31	40,129	3	1,083
British	Liverpool	76	95,106	11	3,095	76	95,106	11	3,095
Dutch	Amsterdam	12	10,200			12	10,200		
French	France	29	60,884	4	1,049	29	60,884	4	1,049
German	Hamburg	22	33,557	8	2,673	22	33,557	8	2,673
Spanish	Havana	13	12,384	1	268	13	12,384	1	268
Various				7	1,354			7	1,354

Export of guano from Orchilla Islands, Venezuela, to the United States of America.

Year.	Vessels.	Guano.	Year.	Vessels.	Guano.
	No.	*Tons.*		*No.*	*Tons.*
1876	13	8,700	1883	25	13,000
1877	3	1,500	1884	28	16,300
1878	6	2,800	1885	4	2,300
1879	4	2,000	1886	8	5,300
1880	14	8,300			
1881	28	15,700	Total	150	80,400
1882	17	9,000			

This guano was shipped in American vessels, one-fourth of it going to the port of Philadelphia, and the residue to Baltimore and other southern ports.

WINFIELD S. BIRD,
Consul.

UNITED STATES CONSULATE,
La Guayra, January 11, 1887.

CHINA.

SHANGHAI.

Report of Consul-General Kennedy.

That part of the trade of Shanghai coming under the cognizance of the Imperial maritime customs shows a gross value of 51,648,423 Haikwan taels, against 50,262,938 for the year 1885, and 40,949,301 in 1884.

The commissioner of customs, in a valuable résumé of the Shanghai trade for the year 1886, states:

If the employment of a larger amount of tonnage, with a marked advance in the gross value of the trade of the port, and an increase in the revenue collection, indicates a prosperous state of trade, then the past year must be regarded as one of the most flourishing in the commercial annals of Shanghai, inasmuch as the general statistics of all the chief divisions of commerce exhibit an improvement over preceding years.

SHIPPING.

An inspection of Table I, appended to this report, shows that the trade of 1886 employed considerably more vessels than in previous years, as the total entries and clearances for the period under review exceed those of 1885 by 729 vessels, aggregating 774,198 tons, of which total increase 644 were steamers, of a capacity of 665,123 tons, and 85 sailing craft, representing 109,075 tons. The table referred to above shows the nationality and other particulars of the vessels engaged, and it will be noted as a somewhat extraordinary fact that steamers under the American flag have now wholly disappeared. American sailing ships, however, in the shipping return take second place among the foreign flags.

VALUE OF TRADE.

The augmentation in the entries and clearances has naturally contributed to an increase in value of trade, imports and exports for 1886 being 51,648,423 Haikwan taels, against 50,262,938 in 1885, or an increase of 1,385,485.

Inspection of Table II will prove that foreign goods imported from abroad and Hong-Kong have only increased by 317,109 Haikwan taels, and that after deducting the excessive reshipments of foreign goods to native and foreign ports, the net total value of foreign imports credited to Shanghai shows a decrease of 1,414,973 Haikwan taels. If, however, we take into consideration that these figures represent but a small per centage of the total of nearly 60,000,000 Haikwan taels, given as the value of the foreign import trade, and that the statistics for 1885 were abnormally large, for reasons assigned below, the falling off in this year's imports cannot be viewed as indicating anything more than a mere temporary decline attributable to the excessive consignments of the previous twelve months.

While the value of native produce imported has increased by 1,064,502 Haikwan taels, the total net value of native imports from Chinese ports credited to Shanghai exhibits a diminution in consequence of the heavy re-exports of produce to both foreign and coast ports.

Coming to exports of local origin to foreign and native ports, a very satisfactory increase is noticeable of 3,353,585 Haikwan taels.

The gross value of the trade, which really represents the cargoes imported, exported, and re-exported, was 4,668,716 Haikwan taels over 1885, and no less than 19,456,279 over the figures of 1884, when commerce was paralyzed by hostilities on the coast.

FOREIGN IMPORTS.

Cotton goods.—The extraordinary increase noted in the importation of 1885 has been followed by as marked a decline during 1886, the total falling off in staple cottons as compared with the previous year amounting to 1,627,758 pieces, made up of the following varieties:

Articles.	Pieces.	Articles.	Pieces.
Gray shirtings	534, 507	English sheetings	68, 132
White shirtings	477, 500	Cambrics	194, 964
Dyed and plain shirtings	64, 905	Velvets	3, 755
T-cloths	250, 046	Unclassed	32, 949

It should not, however, be inferred that this decline indicates retrogression, inasmuch as the figures of 1885 were extraordinarily high, and ought not to be made a basis of comparison, as that year witnessed the renewal of friendly relations with France, whereupon trade made good the leeway that had been lost during the hostilities, consequently 1885 was credited with more than its average annual share of traffic.

Notwithstanding that, on the whole, the year's importation of cotton goods was characterized by a falling off, there are some noticeable improvements in the figures of certain commodities, such as handkerchiefs, American sheetings, and cotton yarn.

The aggregate consignment of sheetings of all kinds also falls short of those of 1885; but taking the American variety separately, we notice the significant increase of 22,239 pieces over last year; so that the decrease falls entirely on the English goods to the extent enumerated above.

Cotton yarn shows a general increase of 34,473 piculs, but while that from the English mills exhibits a decline of 58,456 piculs, the Indian staple shows an increase of 92,627; so that it would seem that not only is the Indian article gaining favor in the China markets, but it is doing so at the expense of the British yarn, which it threatens to displace. Possibly the enhanced demand for yarn has had the effect of lessening the consumption of cotton cloths.

Woolen goods.—With the exception of a falling off in lusters and unclassed fabrics, there has been a marked improvement over last year's figures, aggregating 85,992 pieces, which compensates in value for the decline in the importation of cotton goods.

Opium.—There was a total increase in the importation of opium of all kinds of 714 piculs, with a depreciation in value of 133,010 Haikwan taels. This decline in value, with an increase in the quantity imported, is due to the fact of the price of drug being estimated at an average of 40 taels per chest lower than in 1885, when Patna was quoted as high as 440 to 450 taels a chest, against 415 taels as the highest average for 1886, and Benares 438 to 450 taels last year, as compared with 405 taels during the period under review. The prices touched this season are said to be the lowest known within the last quarter of a century.

The supply of Malwa was 1,843 piculs over the importation of the previous year, Patna 225 piculs and other kinds 376 piculs, making an

increase of 2,444 piculs; but the marked falling off in Benares of 1,730 piculs reduces the net increase to the quantity stated above. From various causes, business is said to have been unprofitable. Foreign merchants attribute the unremunerative state of affairs to increased likin, to the keen competition between importers, and to excessive supplies tending to depress the market. The competition between the Peninsular and Oriental Steam Navigation Company and the Austro-Hungarian Lloyd's Steam Navigation Company, and the consequent reduction in the rate of freight on opium from 22 to 3 rupees per chest from Bombay to Shanghai during the latter half of the season, brought about a further depression in the market, as merchants in India were induced by these low rates of freight to ship largely in excess of requirements, and but for the failure of the crops of native drug in Honan and the Tangshan district of Kiaagnan, which helped to maintain the price of Malwa, the results would have been most disastrous, as there was no knowing to what low ebb prices might have fallen. Our returns only record 1.26 piculs as the total importation of native opium by vessels entering at this office.

Metals.—The increase noted in this branch of trade for 1885 has not been maintained, but the decline is not so marked as to call for special comment. Of the items enumerated in Table III, those showing a considerable improvement over the high figures of last year are unmanufactured copper, pig-iron, lead, spelter, and zinc.

Sundries.—On the whole, trade in goods classed under this heading seems to have been satisfactory.

Most commodities exhibit a moderate increase, with the result of a net gain in the total value of 749,693 Haikwan taels. The greatest falling off in any single article appears against matches, which are short by over half a million gross. On the other hand, flint-stones, which are presumably used for the same purpose as matches, show an increase of 40,000 piculs.

Kerosene oil continued to be imported in quantities exceeding all previous returns. During 1886 the increase was 8,417,694 gallons over the year 1885 (or, say, a little more than one-third higher than the figures of 1885), whereas the importations of the latter year doubled those of 1884.

The total value of the whole of the foreign import trade was 59,733,064 Haikwan taels, being a slight improvement over the preceding year.

NATIVE IMPORTS.

Native imports, chiefly from Tientsin, the Yangtsze ports, Ningpo, Swatow, Canton, and Hong-Kong, yielded 42,382,891 Haikwan taels to the gross value. Table IV enumerates the varions products which contribute to this important branch of our commerce and its redistribution between coast ports and foreign countries. It has already been noted that the bulk of these imports are eventually reshipped, and that but a comparatively small share remains to the credit of this port after re-exports have been deducted, as shown in the last column of the above-named table.

EXPORTS (INCLUDING RE-EXPORTS TO FOREIGN COUNTRIES).

Tea.—The shipments of black tea show an increase over 1885 of 24,937 piculs. In the opinion of a merchant to whom I am indebted for remarks on the course of the year's trade, this advance is due to the

improved demand for low-grade teas both for the English and Russian markets. That in the latter country was brought about in a measure by an increase in the duty, and as the retail price could not well be increased, sellers have endeavored to cover the increase in duty by buying low-cost leaf. The fall in sterling exchange, which declined as much as 10 per cent., is said to have stimulated purchases, as buyers were able to give a considerable advance in tael prices upon rates current at the corresponding period of 1885, without increasing the laying-down cost.

The advance in tael prices here, consequent on the decline in exchange, enabled native shippers of tea from Hankow for sale on this market to make good profits, which induced further buying for resale here, but these purchases meeting a rising exchange, depreciated the tael value, so that the losses thereon have been heavy, and it is doubtful if this branch of the business has paid operators. Neither has the result to foreign buyers been satisfactory. The losses on medium to finest grades have been considerable, rates in England for such qualities being unprecedentedly low, so low that medium and finest kinds were selling at almost the same sterling price, and not a few instances can be quoted of teas with a difference of nearly 20 taels in their cost in China selling at about the same price on the London market. This depreciation in their value in England is partly assignable to a falling off in the Russian demand for fine tea, but the want of keeping properties in China leaf, probably owing to hasty and imperfect preparation, has also a good deal to do with it.

Green tea falls short of the export of 1885 by 21,461 piculs. There was considerable delay between the arrival of the first musters and the beginning of business, owing to the very low prices current upon the American and English markets, their range being so low that buyers were unable to give within two to three taels of the figures required by teamen in order to cover their cost.

After a time, failing to induce business, two or three of the native hongs arranged to ship to America for sale on their own account. This forced the hands of buyers who regarded these operations as the equivalent of the opening of the market, and moderate purchases ensued, in order to have some teas going forward with the first shipment.

The result of these early ventures on native account giving a better out-turn than they would have obtained here induced further operations of a similar character, and they were continued to such an extent as to make them an important feature in the business of the season.

Brick tea was shipped to the extent of 29,845 piculs over the export of last year, with a consequent decline in tea dust, from which article brick tea is made, of 5,793 piculs.

The countries to which tea was exported and the quantity taken by each are detailed in Special Table No. 2.

Silk.—All the various denominations of silk shown in the returns compare very favorably with the export of the previous year.

The increase over 1885 in the case of raw silk is 6,402 piculs; in silk refuse, 11,429 piculs; in wild silk, 2,494 piculs; and cocoons, 2,069 piculs, indicating exceptional purchases during the past season. According to the report of one of the leading shippers, a large business was done during January, and prices for chop No. 4 Tsatlee were then 390 taels per picul. Manufacturers at home having laid in stocks, and not seeing the revival in trade that was expected to ensue, adopted a hand-to-mouth policy in buying, and in May the proportionate price had dropped to 347½ taels for the same silk. One of those sudden changes in fashion in Europe as to the goods to be used then began to

make itself felt, and notwithstanding an increase in the European, Japan, and Canton crops, shipments have hardly equaled the increased rates of consumption, especially in Lyons. The consequence has been a gradul advance in the value of silks, and taking chop No. 4 as the basis prices are now 405 to 410 taels. The rise in all sorts has been gradual and progressive, and it looks as though higher prices would yet be probable if consumption keeps so large.

Sundries.—Among the articles grouped under this heading, in which foreign merchants invest capital, such as hides, hair, hemp, rhubarb, &c., there has been a decline in shipments; but in skins of all kinds there has been a noteworty advance of 217,151 pieces.

TRADE UNDER TRANSIT PASS.

Notwithstanding that there were 12,054 more passes issued this year than 1885 to cover foreign imports inland, the value of this branch of traffic has declined by 78,546 Haikwan taels, from which fact we may conclude that, allowing for depreciated prices, the goods are now made up in smaller lots than formerly, and that consumers and inland retail dealers resort to this market to obtain supplies instead of transacting business as hitherto through large commission houses.

The outward transit traffic has improved in value by 241,617 Haikwan taels with only an increase of 66 passes, but reference to the statistics shows that the large consignments of certificated silk from the interior accounts for this excess.

REVENUE.

The total collection for the year amounts to 4,354,109 Haikwan taels, which figures have only once been exceeded, by a sum under 20,000 Haikwan taels, in 1881.

SHIPPING.

Under this head America is represented by sailing vessels only. Of the 61 which entered the port 22 were from New York and Philadelphia with kerosene oil; 2 were from the Pacific coast with lumber; 1 from Australia with coal, and the balance are vessels trading on the coast and Yangtsze.

STEAMERS.

Twenty-six steamers under the British flag cleared for New York via coast ports, the majority of them belonging to a regular line running from London to Hong-Kong and Japan, thence to Shanghai and Southern Chinese ports via Suez Canal to New York.

IMPORTS.

By reference to the accompanying tables it will be seen that the importation of American cotton and kerosene oil, our chief articles of exportation to China, continues to increase.

During the year a system of counterfeiting well-known American "chops" or brands of cottons by means of importing an inferior grade of unbranded goods, while Chinese ingenuity at imitation supplied counterfeits of the trade-marks most sought after, was brought to light.

One of the native merchants was convicted on the charge of counterfeiting a well-known brand of American sheetings at the mixed court and fined $50. The case was heard before the Chinese magistrate and

Mr. Emens, the interpreter of this office, who sat as assessor, and to whose exertions in the matter the conviction is due.

Additional consignments were received, however, of unbranded American sheetings, and, following upon the conviction of a native merchant who had been fraudulently stamping this class of goods, together with a proclamation issued by the local authorities upon my representation, which was posted in conspicuous places throughout Shanghai, detailing the conviction of the native merchant, and in forcible language forbidding the practice of imitating our brands and trade-marks, the importers had to seek a new market, as the Shanghai dealers thus received an effectual check in a cunning scheme which was calculated to work a great injury upon this branch of our trade with China.

The proclamation was published in the Chinese newspapers which circulate throughout all the treaty ports, and I took the precaution of writing our consuls in China on the subject, warning them against attempts on the part of the Shanghai dealers to work off these goods, which they did not dare offer for sale, but no further counterfeiting was heard of.

I was informed that the action taken brought about something of a panic among native dealers, and such of the goods as had been falsely branded were hurriedly sent to dye-houses, where they were soon rendered past recognition.

From July 2 to September 9 last it is known that 22,000 pieces of unbranded sheeting were imported into Shanghai. This, however, forms but a small proportion of the total importation of this class of goods during the first half of the year. I take this opportunity of renewing my suggestion that all of our American manufacturers be required to plainly brand their goods. Their failure to do so affords an opportunity such as above related, and cannot but prove a general detriment to our trade.

SUNDRIES.

Under the head of "sundries" a considerable amount of American manufactured goods is imported. There is no means of obtaining reliable details of this business, but our merchants are alive to the situation and anything at all likely to be acceptable to the Chinese is introduced. By every mail I have communications from our manufacturers and dealers wherein my aid is asked in furthering their interests. These applications always receive my careful attention, and in many cases I put the writers in correspondence with the importing houses of Shanghai. A great many of these letters are from people seemingly ignorant of the conditions and requirements of the Chinese, and also, if I may be permitted to say so, of the duties of a consul.

Another class of people send out a flood of circulars and other advertising matter addressed to unheard-of places, exhibiting a waste of time and money. By way of illustration I may mention that a firm of New York carriage-builders recently sent an elaborate and expensive pamphlet and price-list to all the open ports and some of the interior towns of China, addressed "To the leading carriage dealer of ———."

The absurdity of this indiscriminate advertising is apparent when it is known that there are no carriage roads in China (except in the foreign settlements of Shanghai), and consequently no carriages.

A hardware firm recently sent out a large number of circulars inclosing indent forms. The following is a sample of the manner in which they were addressed: "Leading hardware dealer, Zuanchow." Supposing that such a place existed, China not having as yet come into

the Postal Union, there is no means of forwarding unpaid mail matter except to the treaty ports; and as the circular was in English, the "leading hardware dealer" in some walled city a thousand miles from the coast, if the circular had found him, would be unable to understand a word of it, or, if he could, and succeeded in forwarding an order to the advertiser, how would the latter go about filling it?

Inquiry at any of our commercial cities, especially New York, Philadelphia, and Boston, would result in finding a firm with a branch house or correspondents in China, whose experience and connections will be of great use to any one seeking to place his goods on the Chinese market. China has no more use for fancy light buggies than the United States has for clumsy sedan-chairs, and I would advise our people to acquaint themselves somewhat with the nature of the market before they blindly distribute their advertisements.

With a view of obtaining practical information and hints on the subject of protecting and increasing our trade, I addressed all of our American merchants here, inviting such an expression of their views as their experience and knowledge of the requirements of our commercial relations with China might suggest, particularly referring to the development of trade and existing regulations affecting it.

The response to my invitation has not been as general as I had hoped, which is doubtless in a great measure due to a press of other affairs consequent upon the opening of a busy season. I give the following abstracts from the most interesting replies received, which came from our leading and longest established American firms:

As a general principle, it may be stated, we think, that trade requires no fostering legislation, and that, when once treaties have been made determining the basis on which goods may be imported and exported, the rest may be safely left to the enterprise of the merchant who, in these days of keen competition, is certain to push its development in every direction where he finds it can be done with profit.

What the American trade requires is:

(1) That China should be held to her treaty engagements, particularly in connection with the tariff on imports.

(2) The abolition of such regulations as actually impose serious obstacles to the expansion of our trade.

With regard to the last there can be no question that we are heavily handicapped in the race that every year becomes more keenly contested, by regulations which, as they appear to have no foundation in reason, may safely be called vexatious.

There is the consular invoice regulation, which has recently been so freely discussed by the chamber of commerce that we will not say so much on this point as we otherwise should.

We very much doubt the efficacy of certified invoices at all, as, if merchants are unscrupulous, they will not hesitate to swear to false valuations; but, whether false or true, their documents are taken at their real value at the ports of entry in the United States, and the goods are examined the same, or if apparently undervalued are appraised by the customs and duty claimed on the appraised cost.

The time and labor of preparing three or four copies of a certified invoice is a serious item in the expense of every mercantile firm, and it is hard enough to have to incur this heavy charge in the case of dutiable goods; but, when the merchandise is not dutiable, as in the case of tea, raw silk, &c., then the annoyance becomes much more aggravated.

The pushing of trade requires every facility for a free exchange of samples, and nothing could be worse than the existing regulations in this respect.

Packages of samples can only be sent through our post-office on payment of letter rates, and if they contain any article of a dutiable nature, however trifling, they are detained and opened. If samples are sent by express the trouble is not obviated or lessened. To give you an example: On the 2d of December last we sent to our partner, in New York, by Wells, Fargo & Co.'s express, as sample of a shipment we were making, a goat-skin rug, costing 2.35 taels. The custom-house in San Francisco appraised the rug at $20, and the duty and custom house expenses amounted to $7.35. On remonstrance from our partner in New York, he was informed that no redress could be had as no appeal was taken at the time. But this could not be done, of course, as he was not on the spot.

Another firm states that—

The principal points in connection with trade between China and the United States that call for particular remark seem to be, first, the steady increase in the consumption of American domestics; second, the imitation by natives of trade marks on unstamped cloths; and, third, the over-supply of kerosene oil and the low value ruling. The consumption of the oil is checked by the imposition of extra lekin (internal revenue) at the outports.

Nothing new, however, is suggested in connection with these three points. This firm furnished the acting consul-general last year certain statistics regarding their filature business which were embodied in his annual report. In this connection they state:

As regards our filature business, there is very little of interest to add to the full report we made last year to Mr. Smithers. Our production has somewhat increased and finds a ready sale on the European markets. In connection with the silk trade generally the growing demand for so-called native filatures is worthy of remark.

I am informed that the reason why this American firm send all the productions of their filatures to the European market is that they turn out a grade of goods that is unequaled anywhere, and in Lyons they can obtain nearly 200 taels per picul more for it than in America, where such a high grade of goods is not appreciated—at least there is no demand.

EXPORTS.

There was exported from Shanghai to the United States during 1886, merchandise, consisting chiefly of tea, silk, and straw-braids, valued at 6,372,845 Haikwan taels.

With the exception of a recommendation, under another heading, respecting the facilitating of forwarding of merchandise samples from China, I have nothing to report, relative to export, that has not been said in the commissioner of customs' résumé, above quoted.

TOOLS AND IMPLEMENTS.

Much has been written in regard to the introduction of mechanical tools and agricultural implements among the Chinese, and there is little left to be said on this subject. It is certain that American tools and implements will have to be specially adapted to the requirements of China before an attempt is made on the part of the Chinese to utilize improvements of which they can alone learn by experience.

Chinese mechanics and farmers have strong prejudices for the implements that have been in vogue for centuries. Experiments of forcing American tools here have signally failed, with a few exceptions. Among these exceptions I may mention saws, pumps, and certain edged tools.

When a Chinaman sees something he can use to a profit he adopts it. There is no reason why we should not supply them with tools and implements, fashioned after their own models, making them better and cheaper with our machinery than they can be made by hand.

Their plows are of the crudest sort, consisting of a crooked beam and a wooden share, used even before the days of Confucius.

A light plow, made somewhat on this style, might take with them, and this applies with equal force to their spades, shovels, rakes, and hoes. The latter is a much heavier tool than ours, and is extensively used in turning over clods, which, in Central China, is the principal system of preparing the ground for receiving the seed. Many of their mechanical tools are very ingenious.

EXCHANGE.

The great disparity in value between gold and silver and the fluctuations in the value of the latter tend to unsettle values.

Calculations have to be based on such risks as to produce a deleterious effect on trade.

All estimates of exchange are made in English currency. The banks fix the rates daily, and it has been so much against the merchant that considerable depression has been experienced here. Purchasing his goods in gold and paying for them in silver has (owing to the decline of the latter, as all transactions here are in this currency) so reduced the margin of profit as to result too often in loss.

When asked the cause of this almost panicky condition no intelligible reason is assigned. Some assert that the passage of the "Bland" bill by our Congress contributed very materially to bring it about. How far this may be so is to a great degree a matter of conjecture, as first one cause and then another is assigned.

From June 1 to August 27, 1886, the Hong-Kong and Shanghai banks' valuation of a tael in United States currency, as fixed by them daily, averaged $1.0675. The tael is not a coin, but simply a weight of silver, equivalent to 1.37 ounces avoirdupois.

The Haikwan tael, as used in the table accompanying this report, is equivalent to 1.114 Shanghai taels.

POSTAL UNION—ITS EXTENSION TO CHINA.

An effort has been made by the Chinese Government through the imperial maritime customs, the ruling spirit and able administrator of which is Sir Robert Hart, who has an ably-organized and well-disciplined staff, consisting of picked men from almost every existing nationality, to bring China within the Postal Union. A postal commissioner has been appointed, and in August last he laid before the representatives of the countries with postal agencies established at this port the scheme of organizing a national post-office. I communicated his proposition to our Postmaster-General, and a favorable response was received, a copy of which I transmitted to Sir Robert Hart, at Peking, who acknowledged the same, with an expression of appreciation of the promptness and liberality of our Government in entertaining the proposition.

The matter was considered by the residents of Shanghai at a public meeting held September 21, 1886, summoned at the instance of the Shanghai General Chamber of Commerce, with the concurrence of the Municipal Council, at which the following resolution was passed:

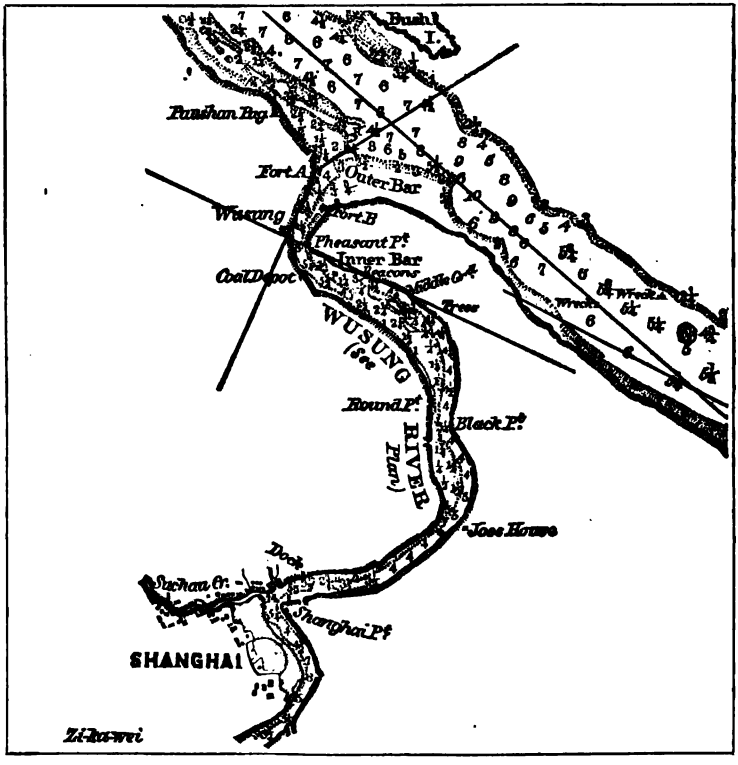
> Whereas the present mail service at this port is satisfactory to the community; and, whereas it is feared that any change in the system, by which the carrying or control would be intrusted to the Chinese, would not be an improvement, but may be the reverse: Therefore,
>
> *Resolved*, That in the opinion of this meeting, the withdrawal of the foreign post-offices at this port is not to be desired.

This action was, unfortunately, somewhat hasty. At this meeting a large number of the best-known British firms were unrepresented, only one American firm was represented, two German, and one French. For the present, and doubtless while all foreigners who are now in China are alive, this national postal scheme, in so far as it relates to our mails, would be, as the chairman described it, a post-office managed by foreigners under the Chinese Government, just as the customs have been carried on for the past thirty years. At present the matter is in abeyance.

The criticism offered by this public meeting bordered upon the verge of sentimentality, and the action taken must have been disappointing to the native party of progress. By perfecting the proposed arrangement of organizing a postal department, with such a ratio of foreign employés as to insure competency and dispatch, China would be taking a step in the direction of liberalizing her policy, and incidentally conduce to the establishment of a broader spirit, every step in which direction tends to open up avenues of trade. Of course circumspection and caution in yielding so important an adjunct to commerce as a speedy and reliable mail system must be exercised.

THE WOOSUNG BAR.

By the subjoined plan, the relation the Woosung Bar bears to the trade of this port will be clearly seen. The Woosung Bar is an accumulation of mud extending across the entrance to the river, over which the highest spring-tide averages 23 feet and at neap-tide 10 feet. For some years the subject of dredging this bar formed a topic of negotiation between the foreign and Chinese authorities. Recently fresh efforts have been made to induce the Chinese authorities to have this obstruction to navigation removed. At present there is some hope of success.



By deepening the water over the bar ships of greater draught would be enabled to enter the port and trade would consequently be stimulated. The consular body here are in correspondence with the taotai,

who has received instructions, we are informed, to proceed with the work, and he agreed to receive estimates from competent parties for the undertaking. Large vessels are now compelled to lighter their cargoes, which are carried to Shanghai, a distance of 12 miles up the Huang-pu, by smaller craft, entailing extra expense and loss of time.

About five years ago, the Chinese purchased a small dredger, which proved unsuitable, and there is a general feeling among foreigners that the Chinese have not much heart in removing this natural obstruction at the entrance of the river to their commercial metropolis. The Huang-pu is almost exclusively a tidal river, and the opinion has been expressed by some that it would be impracticable to keep the bar scoured out on the Eads jetty principle, as at the mouth of the Mississippi. It is thought the outflow of water is insufficient, consequently the dredging must be resorted to.

The mercantile community here is much exercised on the subject, and it is confidently expected that practical results will ensue from the present agition. Shanghai is the great port of China, and the amount of capital represented here, and business done, demand every effort to increase the facilities for trade.

BORNEO TIMBER COMPANY.

A company has been recently started in China, of which an enterprising American residing at Ningpo is the manager, the object of which is to import into China timber from Borneo. They have begun operations and several ship-loads will soon be imported to fill a contract which has been made at Tientsin.

This suggests the idea of similar enterprises for obtaining timber from our Pacific slope.

China is bare of timber, which she must import to meet her growing demands. The manager of the Borneo company informs me that there is a good prospect of making this enterprise a success.

STRAW-BRAID.

There is a vast business done here in straw-braid. During 1886 the total exports from Shanghai amounted to $76{,}346\frac{88}{100}$ piculs, valued at 1,908,663 Haikwan taels. This braid is made at the homes of the poorer classes of people, principally in Northern China, and has become a most important industry, affording employment suitable for women, children, and men incapable of hard work. Large shipments are made to the United States, where it is made up into hats, bonnets, &c. The American bark Antelope, now on the berth for New York, has a cargo consisting principally of straw-braid, and will leave in a few days.

COW-HIDES, GOAT-SKINS, SHEEP'S WOOL, GALL-NUTS, AND RHUBARB.

These staples continue to be exported to the United States, but there is nothing new to be reported under this head.

STRAW SHOES.

In the early part of the year Dr. McGowan, of Wenchow, forwarded, through this office, a large variety of samples of straw shoes to the Bureau of Agriculture at Washington. These ingeniously-constructed shoes are made from rice straw. It is Dr. McGowan's opinion that the

texture and cheapness of these articles might make them available for the laborers in the southern portion of the United States, where rice is cultivated extensively. The art of making them would have to be acquired, but, when once known, it would probably grow up into an industry of some consequence. They are extensively used in this and adjoining sections of China.

COTTON-GINS.

On a visit a few days since to Ningpo, I was informed that if the Americans would make a hand cotton-gin for the Chinese it would meet with a ready and profitable sale. There is a Japanese gin of this kind, worked by foot, but it does not pick the seed well, and is but partially adapted to its purpose. If the inventive genius of our mechanics could be directed to this they would soon make a suitable gin. The Chinese cotton is coarse and very short staple. The seed is also small. The machinery would have to be adapted to these conditions. An American gin, such as is now used in the South, with a crank to turn by hand, could be easily suited to this work. Anything not operated by manual labor would not be taken up by the Chinese, whose conservatism is against innovations of too pronounced a type; besides, their cotton-planting is done in small areas by small farmers, and they are not accustomed to other than the simplest machinery.

If any gin-maker wishes the idea elaborated I could get the details for him.

ANNUAL REPORT OF THE STATISTICAL SECRETARY OF THE IMPERIAL MARITIME CUSTOMS FOR THE YEAR 1886.

Since the foregoing was written, I have received the report on the foreign trade of China for 1886, in which the statistical secretary, under date of April 9, 1887, in a preface to the returns, remarks:

But, before proceeding to details concerning any special articles of commerce, it is necessary to devote a paragraph to the subject of exchange, an element which has affected many departments of foreign trade during the year to an extent only less grave than war itself would have done.

In this short report, I may, however, do little more than mention it; but the commercial reader, with the figures before him, which I shall give, will have no difficulty in realizing its influence.

The course of exchange during 1886 was lower even than in 1885. Its effect upon the silk market is referred to below, and it is also several times alluded to in the port reports which follow my own, especially in connection with tea. I have before me an exhibit of the closing rates at Shanghai for bills on London at four months' sight on European mail-day of each week throughout the years 1885 and 1886. From these quotations I give the following abbreviated table, taking the first quotation of each month:

Month.	1885.	1886.	Month.	1885.	1886.
	s. d.	*s. d.*		*s. d.*	*s. d.*
January	4 11½	4 7⅝	July	4 10½	4 5⅞
February	4 11	4 7⅞	August	4 11½	4 3⅝
March	4 10⅝	4 7⅛	September	4 9⅝	4 3⅞
April	4 10½	4 7⅛	October	4 8⅝	4 6
May	4 11	4 7½	November	4 8½	4 7⅛
June	4 10½	4 6⅝	December	4 8½	4 8⅛

NOTE.—The figures represent the value of the Shanghai tael.

THE DEVELOPMENT OF AMERICAN TRADE INTERESTS IN CHINA.

As previously intimated in this report the activity of our merchants, stimulated by strong competition, tends to establish trade in every direction. So long as the merchant is assured of official protection and has a confidence that the consular officer will see justice done him in any differences that may arise between him and the native merchants, he is content that the development of commerce be left to him. However, as I am constantly in receipt of inquiries from our manufacturers and merchants in the United States relative to the introduction of their wares, I will give what appears to me as being suggestions worthy of attention.

If samples of goods adapted to the requirements of China were judiciously selected and placed before the Chinese, it might lead to business being done. The great difficulty in the way of establishing a profitable trade is the lack of economy on the part of the commission agents or importers.

The Germans are pushing their trade in this market by indomitable personal effort, economy, and strict attention to details. The Chinese are, certainly, very apt in learning the conditions of trade and are absorbing lines of business which were formerly monopolized by foreigners. Apparently innate traders and with the secret of economical living and minimizing expenses in every direction, their net profits are, of course, comparatively higher than those of their foreign competitors, which enables them to accumulate capital and defy foreign competition. All large transactions between foreigners and Chinese are usually for cash, but in some instances China merchants are granted credits.

A few days ago an American retiring from China leased some property to a Chinaman for a term of thirty years, at 5,000 taels per annum. This Chinaman is an extensive dealer in iron and naval stores. He also handles a considerable portion of the kerosene oil brought to this market. He began business in a very humble way, and by thrift, energy, and economy has risen to prominence as a capitalist and merchant, thus demonstrating the power of Chinese shrewdness and economy, with which American and European merchants must cope.

POST-OFFICE FACILITIES.

I again quote a remark of one of our leading American firms here:

> The pushing of trade requires every facility for free exchange of samples, and nothing could be worse than the existing regulations in this respect.

I need not dwell upon this point, as it is a matter which has repeatedly been represented to the Post-Office Department by myself and predecessors in office, without an accomplishment of what is so badly needed. It appears impossible to gain anything by correspondence, and I would suggest that some one be deputed to investigate the requirements of the case, with a view of obtaining for the American the same facilities that his European competitors possess.

WESTERN CHINA.

The subject of developing trade in Western China is attracting a great deal of attention in England. While this topic may not properly belong to a report on the trade of the port of Shanghai, but rather of China in general, I would state that at leas two of the local steam

navigation companies operating on the China coast are waiting an opportunity to establish steam communication with Chungking, the capital of Szechuen.

In a former report I compared the amounts of the principal woolen and cotton goods imported into Shanghai with the amounts of the same goods sent under transit pass into Szechuen, and also quoted abstracts from customs reports on trade in this part of China.

I have recently been informed that a company styled "The Upper Yangtsze Steam Navigation Company, limited," has been formed in London.

While complaints that imports exceed the requirements of the market are heard, the opening up of new territory cannot fail to demand attention.

SUNDRIES.

By reference to the subjoined table of imports, a good idea may be obtained of the sundry classes of goods for which there exists a demand.

Candles, soap, and cooking grease are articles in every-day demand. Of the former, during 1886, 29,726 packages, valued at 41,617 Haikwan taels, were imported. If the Chinese were given a good imitation of their style of red candles used in their worship an immense sale would result.

Oil for cooking.—In this country, where nearly every article of food is prepared in oil, a good substitute would find a sale.

Soap.—During 1886, 181,365 packages of soap, valued at 108,819 Haikwan taels, were imported. I am informed that there is a demand for a better grade—that now used being chiefly of very inferior make.

There is also a growing business in dyes and colors, flour and needles.

It is impossible, in a trade report for Shanghai alone, to discuss all the trade possibilities of so vast a country as China; but I hope to be able, later on, to make a more general report, and also treat of the enterprises anticipated and in progress that bid fair to bring about wonderful changes in all channels of commerce.

J. D. KENNEDY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Shanghai, April 21, 1887.

FOOCHOW.

Report of Vice-Consul Cowles.

Foochow tonnage returns show, arrivals, 300,000 tons steam; 20,000 tons sail; the American flag shown only on a 180-ton Hong-Kong-bought schooner, whose three arrivals make the 540 tons American shipping.

The coasting vessels of western type displaced the panier-laden junk; for the former, cargo all inboard, could beat against monsoons, and the latter could not. The sailing vessels in turn now see themselves ousted by modern compactly-engined steamers. Such are available for charter from $30 a day (500 tons dead weight). Their expenses are moderated to a point where they can accept slow-loading and slow-discharging cargoes, such as coal, poles, peas, bean oil, bean-cake, which were before the reliance of the sailing vessel. Some sailing vessels have already followed the junks to last moorings.

American enterprise is evinced here, however, in the fleet of 40 sixty-ton lighters, which lighter nearly half the hundred million pounds of tea hence twelve miles to the ocean-steamer berth below, and mostly by night, in swift tide and against foul winds, yet for years without serious mishap.

Imports from America none. The indirect imports for 1886 were totaled by Consul Wingate at $126,000. Tables for 1886 are as yet unavailable.

Foochow is the home of winter sunshine, poured from a clear sky, from the middle of October to the middle of January, so needs but 300 bales of heavy American drills and sheetings.

Fokien lives on rice, getting the little wheat necessary for the rare indulgence of pastry by coasters from the northward, so needs but the amount of two car-loads of American flour.

Foochow is closely built. Many booths have only from 12 to 20 feet frontage. From this space is begrudged the foot necessary for brick side-walls, hence the buildings are match-box-like structures of soft pine. These are crowded with big and little, all careless of fire. Conflagrations are frequent; once started for the most part stopping not until from fifty to six hundred dwellings are consumed, and the flames are checked by an engirdling fire-wall. Kerosene burned in soldered-tin lamps, as it is, has been the frequent cause of disastrous fires. Accordingly the use and sale of kerosene have been almost effectually prohibited in the city, though increasing a little in the country.

The view herewith may excuse the prohibition. So Foochow takes but a 20-foot cube of kerosene. Add seventy centals of ginseng, at $4 per pound; $25,000 worth of shell-fish, and clocks, novelties, preserved fruits, &c., to make the total of $126,000.

The surface of the country is eroded into a wilderness of hills, intercommunicating by the cuts eroded. Forty thousand men and women make summer wages as pack-animals, bearing by shoulder-yoke each his or her cental of tea daily up and down the mountain passes for twenty-five cents a day. Even where their route is parallel with the coast the authorities will not allow even native vessels to compete with and displace this portage. Labor-saving is here no object, labor-providing is. So Fokien will not soon ask for railway material.

Foochow imports but $6,000 worth of quicksilver. It consumes 52,000 centals of lead in tea-chest lining, but this does not appear to be American.

Of China's 200,000,000 pounds tea, Foochow exports the half, 100,000,000 pounds, all black tea. In 1886 exported to England 58,000,000 pounds, (increase 7,000,000) in 73 British steamers and 6 sailing vessels (one lost), all British but two, and neither of those American; to the rest of Europe, 1,000,000; to Australia, 20,000,000, in 19 British steamers (freight 27½ cents per cubic foot); Sydney taking as much as the United States, and Melbourne twice as much; to America 7,000,000 (4,000,000 Oolong, 3,000,000 Souchong).

There was an increase of 3,000,000 to America, of which 1,500,000 was increase to Canada, now taking 2,000,000 via New York in transit. This foreshadows direct trade with Canada, and her weaning from her former metropolitan source of supply, London. The remaining 1,500,000 was real increase to the United States. The certified value of the combined 7,000,000 was $1,500,000. Freight to Atlantic cities by Gibraltar, 2½ cents per pound net weight by Pacific steamer; and Pacific Railroad, 3 cents per pound gross weight. One hundred and sixty centals were tea in which jasamine blossoms had been buried, leaving their fragrance permanently with the tea. Seventeen centals were Flowery Pekoe, the first furzy-white, flower-like leaf shoots of spring. To South Africa went over 500,000 pounds in one German bark.

Foochow tea goes for the most part to England and her newer colonies, whose taste is for the fully black tea called in America Souchong. Of 102,000,000 pounds, 98,000,000 are of this and only 4,000,000 are Oolong.

To produce the Oolong the wilting process is stopped short of the reddish or dark color reached in the black tea, Souchong. The districts which twenty years ago half-wilted 12,000,000 pounds Foochow Oolong for America now wilt to redness about 8,000,000 of this for England, and half-wilt but the remaining 4,000,000 for America. For Oolongs America now depends upon Formosa. Twenty years has seen tea planting begin and thrive in moist, sub-tropical North Formosa, where constant bath of mist and shower encourages the virgin soil to push the new bushes into six flushes of leaves a year.

The Foochow export would by this time have been twice as great had not Government tax on tea, 2 cents *octroi* and 3 cents export per pound, overweighted its own patient tea growers and pickers in the competition with India. Twenty years ago India produced scarce 5,000,000 pounds; now 70,000,000. Japan, too, enters into competition, and her 46,000,000 pounds displace so much China, green and Oolong. The great Indian growth, now three-fourths as large as Foochow export, and stronger, distances Foochow tea on the London market, and leaves to Foochow, formerly so well reputed, but the rôle of supplying medium and common tea.

This Foochow could do, for in winter a pound of tea can be picked from the bushes for 2 cents, but the 2 cents octroi and 3 cents export duty, with costs of preparation, packing, and transportation would make a price which could not be recouped. But for this Foochow export could still increase in spite of Indian, Formosan, and Japan competition. As it is 20,000,000 or 30,000,000 pounds of tea are here allowed to grow stiff and hard on the bushes, till they fall the next spring. China agreed in 1860 to take but 2½ per cent. ad valorem on tea as *octroi* and 5 per cent. as export duty, but these were turned into the specific rates above mentioned, which now, that the average value of China tea has

fallen so greatly, almost prohibits the export of teas below 12 cents per pound. China and India are Nevada's natural absorbents. A reversion to a 5 per cent. export duty on tea would help absorb another 10,000,000 silver a year, by promoting China's common-tea export. Silver and produce retain much the same relations as of old in China.

To pay for the tea at average 15 cents gold in China (needing $15,000,000) $8,000,000 more silver came in than went away again. These the banks sold to the merchants, who drew on their London friends bills payable four months after sight, the banks demanding for each silver dollar parted with bills for 3*s.* 3¾*d.*, May 26, but 3*s.* in early August and 3*s.* 4*d.* at Christmas, showing an extreme fluctuation of 13 cents in the price of a silver dollar. To further help balance the tea, 4,300 chests (575,000 pounds) came on from Hong-Kong out of the 10,000,000 pounds reaching that port and sold for gold $2,000,000. Most of the remaining balance to pay for the tea was found by natives who had dollars here and wished to pay debts in Shanghai, and so gave dollars and took drafts on Shanghai.

Of the 10,000,000 pounds opium reaching Hong-Kong, 7,500,000 come on and frankly pay duty at the treaty ports of entry, the other 2,500,000 disappear from farther view at Hong-Kong and its neighboring bights and bays. The Peking Government hope, by arrangements made with the Hong-Kong and Macao governments, to obtain import duty on that portion hitherto escaping observation (one fourth of all that India sends). It has also now intrusted to its maritime customs staff of 500 Europeans and 1,500 Chinese, the collection also of the octroi of over $100 gold per chest, which means $8,000,000 more of revenue intrusted to European servants to collect.

Tea-dust exported as loose dust must pay the 3 cents silver per pound export duty; pressed into a thin brick it is taxed but ¾ cent. The tea-dust comes dry from the bin, one moment is subjected to a half minute's flash of steam on a cloth and sieve over a boiling cauldron, is shot deftly into a hard-wood mold, a tompion inserted and an intermediate cap-block added above, and then mold with tea inclosed is shoved between the solid foundation of the press and the great descending levers upon the outer end of which ten men fling themselves. Keys are swiftly driven in to keep the pressure gained, the big lever flies up, the keyed mold is slipped out, and put away. The brick is not released from the mold till the imprisoned heat has gone over to the mold faces, leaving the tea-dust content perforce with its new form.

Six million such impacts give as many bricks here, and Hankow turns out still more, and all are packed in wicker baskets, strapped with bamboo withes to stand the transit to Peking and subsequent camel-portage across the mile-high Mongolian steppe to Siberia, where the brick is pounded again into dust and infused with milk, butter, and salt, making it both food and drink. A little goes by the Amoor River to where Siberian roads begin, thence to Kiachta and steam waterways.

Two Russian firms here are now introducing steam machinery moving hydraulic presses which put 5 tons pressure upon the inch of unsteamed dry tea-dust, forming little chocolate-like tablets, but this only for the minor supply of dust from finest spring leaf.

The bulk of the tea-dust is still pressed, 2 pounds at one impact, in the ponderous wooden presses before described, after being dampened by steam from cauldrons under which annually flash away 3,000 tons of coal.

On September 21, 1886, arrived at the Government arsenal here from Shichau's works, Elburg, Germany, the torpedo-boat No. 60, of 45 tons burden, 44 meters long, 5 meters broad, drawing 3½ feet forward, 7½ feet aft, with screw casing and rudder at either end, steam steering-gear, two torpedo tubes. She did 24.6 knots at trial in Germany, and over 23 after the voyage out. The engines were 1,500 indicated horse-power; consumption, 8 tons at 24 knots, 3 tons at 10 knots. Captain, mate, three engineers, four firemen, and five seamen brought her out, and the captain declared his readiness to bring another out, avoiding the typhoon months.

Of the work of the American churches in Foochow and its environs a statement of the appropriations will give a conception. Forty-five thousand dollars gold are spent by the American Board of Commissioners for Foreign Missions, $25,000 by the Missionary Society of the Methodist Episcopal Church, and $15,000 by the Woman's Foreign Missionary Society of the same denomination.

Three hospitals with dispensaries are maintained by these societies, reports of two of which I inclose.

There is besides a hospital supported almost entirely, as the mission hospitals are partly, by the foreign mercantile community. This last-named native hospital was this year destroyed by fire and $10,000 was promptly subscribed to rebuild, the contribution mainly coming from one hundred of the European community.

The year was a fairly healthful one till August, when a freshet inundated the lake-like basin in which Foochow lies. Fever of malarial and typhoid types has since prevailed, and lately an epidemic of small-pox. In an orphanage under the care of Catholic sisters, among 300 children 90 have been attacked, and 70 died, showing its virulence.

We expect in 1887 to be in telegraphic communication with North Formosa by a cable from Amoy to Tamsui.

J. P. COWLES, JR.,
Vice-Consul.

UNITED STATES CONSULATE,
Foochow, January 31, 1887.

COREA.

INTRODUCTION TO RETURNS OF TRADE AND REPORTS ON TRADE OF CORREAN PORTS, 1885.

[Transmitted by Minister W. H. Parker.]

There are statistics for but one complete year with which to compare the figures showing the trade of 1885, the ports having been opened to foreign trade late in 1883.

A comparison of the figures of 1885 with those for 1884 reveals a substantial gain in most of the principal imports and a large increase in the total value of the trade; and had it not been for the political troubles at the end of 1884, which caused a widespread feeling of apprehension and brought trade into a state of stagnation, from which it recovered only very slowly, the increase would doubtless have been much greater. But in spite of the fact that they show the volume of trade to have increased very considerably, the statistics for 1885 are disappointing in that they afford no signs of the development of an export trade.

With the exception of gold dust, and, perhaps, also hides, there is no article amongst the exports which appears in sufficient quantity to be classed as an export staple; and the minor articles which make up the scanty list present a pitiably small total, which would lead one to form a poor opinion of the enterprise of the people and the productive resources of the country. From this point of view the prospect for the future of the trade is not bright. The balance is immensely against us, and it is probable that the import trade will soon reach its limit unless there shall be an improvement in the export industry. The export of gold dust at Yuensan maintains the balance there, and that branch of industry might be so largely developed as to provide a purchasing medium for increasing the import trade at the other ports, if the gold mines and washings were properly developed and systematically worked on modern methods. The overland export to China of a limited amount of red ginseng accounts for a substantial portion of the difference between imports and exports as shown in the customs returns; and there can be no doubt that the smuggling of ginseng and the illicit junk traffic at the northern ports are of material benefit to the legitimate import trade, the proceeds of the sale of products thus leaving the country being converted into foreign goods, which are largely brought by steamers to the open ports of Corea.

The export of red ginseng by sea is prohibited, and only a limited quantity (about 20,000 catties) is allowed to be taken annually by the overland route to China, at great expense of transportation as compared with the sea route. As this commodity is one of the most valuable of Corean products, the removal of the prohibition on its export would at once prove of the greatest benefit to trade, through the additional purchasing power which would be gained by the consequent increase of its export and the saving of expense in transportation. Although a change in the regulations governing the trade in this commodity has been repeatedly urged upon the Government, there seems to be no immediate prospect of the present system being given up.

A common way of taxing an industry is by granting monopolies to individuals or companies, to whom the whole of certain goods named must be sold at a fixed price. For example, hides in many districts can be sold only through the hide monopolists, who deprive the producers of the profit which a free market would afford them. The government officials levy a heavy tax in one shape or another on several branches of industry that seem to possess the elements which, if encouraged or left alone, would develop a degree of prosperity and success, and help to enrich the country and increase its trade. But incentive to enterprise is wanting under this system, which permits others to appropriate nearly all the profit over the bare living expenses of the producer.

It is too much to expect that, even without these official restrictions, Corea should, after her centuries of seclusion, begin at once to supply the outside world with any considerable amount of her products. Having had no intercourse with other countries save the one-sided frontier trade with China, her people have had no occasion to raise in the aggregate more of any one product than would suffice for home consumption. Traffic has been confined to her own territory, and means of communication have been so inadequate and transport so expensive that each district has found it to its advantage to be self-supporting as far as possible. The Coreans are not a maritime people; the coastwise traffic is very slight, and the numerous internal waterways which make transport comparatively easy in China are wanting here. Packmen, pack-ponies, and bullocks are the only means of transportation; the country is hilly and the roads rough; and all this has tended to confine interchange of products to small areas.

Under the most favorable circumstances it would take the people some time to become fully aware of the advantages which the opening of the country to foreign intercourse promises, and to learn that, if they would avail of these advantages, they must produce enough of the products for which their own country is best adapted to pay for the commodities which foreigners offer them. As fast as they learn and practice upon this principle (provided their enterprise is not hampered by undue restrictions), so fast will commerce increase and the condition of the people be ameliorated.

The value of foreign goods is appreciated, and the demand for them—especially for cotton piece goods, kerosene oil, dyes, and matches—is only limited by the ability to pay for them. With the exception of piece goods, foreign imports do not appear to have penetrated into the interior in any considerable quantities. Matches, aniline dyes, cotton yarn, and kerosene oil are sold at the little booths and stands which serve for shops in the streets of Seoul, in quantities suited to the finances of the purchasers. Kerosene oil is pumped from the tin directly into the lamps brought to be filled, these lamps being often aniline dye bottles, holding about half a gill, having tin burners fitted loosely on top, and being without chimneys. Matches are sold in single boxes, and even in little bunches of about a dozen matches tied round with thread. So small are the dealings amongst a people to the majority of whom a monthly income of two or three dollars is sufficient for all necessities.

After all, it must be confessed that the people are easy-going, unenterprising, and improvident, working only for the necessities of the day and returning to their pipes when those necessities are supplied, and that they do not make the best of such opportunities as they have. The country is poor in consequence, and it must take years of foreign intercourse and radical internal reforms to beget and foster a spirit of enterprise which shall remedy this condition. The resources of the country have probably been overrated, but the agricultural, grazing, mining, and home manufacturing industries might be largely developed, and a corresponding increase in the import trade would follow. By home manufacturing industries I mean the manufacture by the people at their own homes of various articles, principal amongst which are straw mats, which are made in many varieties, some of which are unexcelled in fineness of texture. It would seem as if these mats ought to form an important export, but thus far they hardly appear in the returns. Silk growing is directly encouraged and aided by the Government. Silk has never yet been produced in sufficient quantity to form any considerable export, although a great deal of native silk is consumed in Corea. A company for the growth of mulberry trees, in which the Government is largely interested, has now two extensive nurseries, in which are growing about 1,000,000 trees, the enterprise being under the superintendence of a foreign expert. Unless unforeseen accidents intervene, this industry should render substantial returns in the course of a few years.

No sudden growth in commercial prosperity can be looked for in Corea, but we may hope for that gradual and sound improvement which will follow reforms in the system of taxation, the abolition of monopolies, and the adoption of methods for encouraging existing industries and starting and fostering new ones.

H. F. MERRILL,
Chief Commissioner of Customs.

SEOUL, COREA, *May* 9, 1886.

JENCHUAN TRADE REPORT FOR THE YEAR 1885.

Jenchuan, Jinsen, or Inchun—also frequently called Chemulpo—was first opened to foreign trade on 16th June, 1883, although the customs did not come into operation until 3d November of the same year.

When Chemulpo was first constituted a port there was nothing to be seen but a few thatched hovels, less than a dozen in number, the dwellings of a handful of poor fisher folk. The port was one in name only, for of trade there was none.

The place was chosen as the site for the seaport on account of its comparative nearness to the Corean capital, Seoul or Hanyang, distant about 35 miles, which city is the center of whatever there is of wealth and tradal enterprise, so far as the central portion of the kingdom is concerned.

During the past two years and a half a township has sprung up with some 146 houses, 3 hotels, 3 consulates, 2 banks, and a telegraph station connecting it with the world. The port has a population of 725 inhabitants, comprising 573 Japanese, 130 Chinese, and 22 Europeans. The trade is carried on by 73 mercantile firms and stores. The native settlement on the high road to Seoul has increased to 120 thatched houses, inhabited by 700 souls.

Although the trade has suffered many of the vicissitudes and buffets of adverse fortune, it has nevertheless very considerably developed during the past year.

In dealing with the commerce of the last year, the only figures available for comparison are the statistics for the total trade of 1884; but in all comparisons between

the two sets of figures allowance must be made for a margin of error, as the figures given for 1885 are approximations only, the statistics for the first half of the year having been lost during the destruction of the custom-house by fire in July. Every care, however, has been taken in compiling returns for that period, and allowances made on account of possible error must have in view the fact that the approximate values given are, if anything, under rather than over the actual value, so that deductions drawn from these figures would, were the correct returns available, be more favorable than they are at present.

The total trade of 1885 was $1,159,322, as compared with a net total of $585,960 in the previous year. The following figures will better convey an idea of the improvement:

	1884.	1885.	Increase or decrease.
Imports:			
Foreign	$568, 925	$995, 539	+$503, 283
Native		16, 649	
Exports	125, 667	154, 898	+ 29, 231
Gross total trade	634, 592	1, 167, 086	+532, 494
Re-exports	48, 632	7, 764	— 40, 868
Net total trade	585, 960	1, 159, 322	+573, 362

The increase in the net trade of $573,362, being an advance of 97.9 per cent., is especially striking when it is remembered that during 1885 the trade and commerce of the world has suffered from severe depression.

During the whole of the year traders in Corea have had to struggle against various circumstances, causing a feeling of considerable distrust, so that business transactions have been difficult, although they have for the most part been conducted on a very sound basis, partaking largely as they did of a hand-to-mouth character.

At the commencement of the year gloomy forebodings as to the prospects of Corean trade and affairs generally were entertained, but although home and foreign politics have been actively prominent and seriously affected trade during the earlier half of the year, it is a matter for congratulation that the state of affairs, commercial and otherwise, in this kingdom has not been so somber as the disastrous close of 1884 foreshadowed. The volume of trade has, despite various hindrances and drawbacks, steadily expanded in so noteworthy a degree that net imports have risen from $460,293 in 1884 to $1,004,424, or 118 per cent.; and that whilst re-exports have fallen 84 per cent., dropping from $48,632 to $7,764, exports have advanced rather more than 23 per cent., rising from $125,667 to $154,898.

These increases are not due to any sudden fall in the prices of commodities, enabling more people to buy, for in this market the prices have ruled slightly higher than in the previous year; but are the direct outcome of a genuine expansion of legitimate trade.

This satisfactory result is attributable in a large degree to the keen business instincts of the Japanese, which led them, when they found little or no demand except for small parcels of piece goods, to try and force a market for foreign commodities by persistently bringing small shipments of various articles, in the hope of creating a demand, in which they have been very successful.

The greater portion of the trade of the port, about 75 per cent., is in the hands of the enterprising Japanese merchants.

Although the trade is almost entirely in the hands of Japanese and Chinese, it is noteworthy that the bulk of imports is the product of British industries.

SHIPPING.

The total tonnage which came under the cognizance of the customs during the past year amounted to 28,648 tons. Of this amount 22,989 tons were steamer tonnage, whilst the balance of 5,650 tons is accounted for by junks, and sailing vessels of foreign type.

The entries were for steamers 29, and for sailing vessels and junks 75, or 104 in all.

Of the steam shipping, 18 entries, with a total of 7,141 tons, were under the Japanese flag; 9 entries, accounting for 3,060 tons, under the German flag; 1 entry, with 809 tons, under the British flag; and 1 vessel of 761 tons, carried the Chinese flag.

Of the various descriptions of sailing vessels, 42 entries, giving 2,294 tons, were Japanese; 32 entries, showing 594 tons, were Chinese; and the Italian flag was commercially represented, for the first time in Corean waters, by a small schooner hailing from Nagasaki, which had a carrying capacity of 5 tons.

REVENUE.

The gross revenue collected at this port by the customs during the year now under review amounted to Mexican $79,434.61, as against Mexican $50,117.76 in the previous year.

The figures given for 1884 may be taken as substantially correct, but are open to a small margin of error, owing to nearly half the duties having during that year been collected in copper cash.

The gross revenue for the past year thus shows an increase of 58 per cent. over that of the previous 12 months. The increase seems less than that warranted by the large addition to the total trade, but the apparent shortcoming is due to the fact that during the early part of 1884 the merchandise imported by the Japanese paid duty according to the tariff of the Japanese treaty. The duties leviable under that treaty were in the main higher than those provided for by the British treaty, and it was not until the most-favored-nation clause was conceded to Japan that the present scale of duties came fully into force.

IMPORTS.

The net trade in imports amounted to $1,004,424, as compared with $460,293 in 1884 so that not only did the net import trade of this port increase by 118 per cent. over the net value of imports for 1884, but it has gained nearly 12 per cent. on the total net value of the imports into Corea at the three open ports, which in 1884 amounted to $897,643.

Part of this increase is due to competition between rival steamers and between the Chinese and Japanese merchants, which has a cheapening influence on the selling price at this port of foreign imports, but mostly it is due to a genuine increase of the demand for foreign commodities.

The bad harvest of the past year, when a period of comparative drought was succeeded by another of excessive rain, can only have impaired this branch of trade, as it lowered the purchasing power of the people. It has, however, led to an undue inflation of certain imports, especially raw cotton.

The import trade depends on articles that are not luxuries to the mass of the people, but for which there is a constant consumptive demand. Amongst the staple articles of import some items exhibit a marked decrease.

In cotton goods, Victoria lawns, the import of which in 1884 amounted to $90,803, underwent a heavy decline, amounting only to $48,343 in 1885. This decided fall is due in a measure to the market having been overstocked in the previous season, and partly to the coolness of the past summer; but is mainly to be accounted for by the fact that this fabric is of too poor and flimsy a character to be suitable to the needs of the people. They found it unprofitable on account of its inability to stand wear and tear and frequent washing. These remarks also account for the fall of striped lenos from $21,375 in 1884 to $14,572 in the past 12 months.

The value of lamps imported has also decreased, owing to their extensive manufacture in this country.

There is a slight decline in the import of matches, due probably to the sale of the product of the Corean match factory near Seoul. The matches imported are principally of the best Austrian manufacture. Bryant & May's wax vestas in small tin boxes were first imported to the extent of $767, and will probably increase, as the Coreans have a preference for these handy articles.

Rattan, which is extensively used for the manufacture of a kind of undershirt, made of large rings interlaced, and of rattan cuffs, which serve the double purpose of conducing to the coolness and cleanliness of the wearer in hot weather, has fallen from $1,732 to $227.

Amongst metals the chief articles of interest are lead, spelter, and copper. The quantities of these metals imported in 1883 and the early part of 1884 were far in excess of all requirements, and represent the supply to meet an extraordinary and unnatural demand beyond the necessities of legitimate trade.

Lead, as an article of import, almost disappeared from our returns during the past year, only one importation of $26 having passed the customs. This is mostly attributable to the excessive imports of 1883 having thoroughly overstocked the market, so that since there has been a steady re-export of this metal, which, as large stocks were unsold at the commencement of the year, will probably still continue.

Spelter has also sustained a heavy decline, falling from $12,568 to $5,579. The demand for this metal was to a great extent dependent on the activity of the various establishments for turning out cash, in the manufacture of which it was extensively used. The wise action of the Government in confining the production and issue of this currency to one establishment in Seoul, under their own control and supervision, has naturally had a strong discouraging effect on the import of spelter.

There was a total decrease of $18,163 in the value of the import of white shirtings, T-cloths, grass cloth, woolen lusters, rice, iron, tin plates, white copper, tin compound, metal ware, nails, flour, and medicines.

The import of iron will probably never be large, as an excellent quality is produced in the two northern provinces, as well as in Chullado.

The decreases in the above items have, however, been more than counterbalanced by the substantial advances made by other commodities.

Among cotton goods, gray shirtings show for the year an import of $546,258, as against $180,442 in 1884; representing an increase of 202¼ per cent.

Only the best qualities of these cloths find a ready and regular market, although small parcels of inferior grades can occasionally be sold. The shirtings most suitable to this district are not less than from 10 to 10¼ pounds, and those cloths which contain the least sizing are chiefly in demand, although American shirtings have no market.

That such heavy cloths are required for this port is to be accounted for by the excellent quality of the native cloth, which is better and more durable than most shirtings. The ratio which the price of good native cloth equal in quantity to a piece of 10¼-pound shirtings bears to the price of the foreign cloth is as 20 to 13.

Judging from the quality and price of the samples of native cloth I have seen, there should be an opening for cheap linen and good cotton goods, such as sheetings, duck, drills, cotton unions, and others that are stout and strong and will keep a good appearance after having passed the somewhat severe discipline of Corean washing.

The import of raw cotton increased from $1,277 to $18,672, but this was due to unhealthy speculation. The quantity imported, especially of inferior grades, was largely in excess of the demand, and only the best qualities found a market. The speculation was owing to the cotton crop being generally bad, and almost entirely failing in the neighboring province of Whanghaido. There are considerable quantities of cotton still in stock, and the re-export of this surplus will probably be brisk during the present year.

Corea produces cotton of a superior staple in considerable quantities, especially in the provinces of Chullado, Whanghaido, and Pingando. The crop is largely consumed in the country in the manufacture of the strong and excellent native homespun, but I am assured by the native merchants that there must be a considerable margin for export. It is, however, a suggestive fact that although cotton as a raw staple always commands a ready sale and maintains a high market value, even when the products manufactured from it may be cheap, only a few small parcels of Corean cotton have ever passed the customs, and these, too, of an inferior quality. That the unconsumed remainder does, however, leave the country by some outlet is certain, as Corean cotton is purchasable in China and Japan, its quality being such that it is sought for and realizes higher rates than the Chinese or the Japanese article.

Japanese piece goods form a new article of import. They meet a demand for cheap and stout clothing, and have reached a total of 16,123 pieces, valued at $8,627.

Foreign dyes are evidently making a favorable reception for themselves, the import for the past year having been $25,701, as against $11,564 in the preceding year. A larger consumption of the better dyes may be expected. The dyes imported are mostly aniline; the colors favored being dark and light blues, scarlet, pink, lavender, violet, and green.

Needles of European manufacture have found a ready and increasing sale. There were imported during the last year 18,878 mille, valued at $4,441.

Window glass has not made the rapid progress expected, showing only an advance of $514 during the year.

The import of silk piece goods has increased 88 per cent., there having been imported 13,208 pieces, worth $49,076, as against only 8,428 pieces, valued at $26,037 in 1884.

Blankets are slowly but steadily advancing in favor, the import, small as it is, having nearly doubled itself during the year. Blankets to command a sale in this market should be cheap, but warm and heavy. The substantial cotton quilts in general use, and the universal native custom of sleeping on heated *k'ang* floors, doubtless militate against a rapid increase in the sale of blankets.

Whole pepper used with the red pepper in the preparation of food, and largely taken on account of its peculiar properties as a stimulant, has risen from $1,836 to $2,198.

Kerosene oil has found a ready market, the import having increased by 291 per cent. over that of the previous year, which only showed a total of 42,580 gallons, valued at $7,444, as against 162,410 gallons, worth $29,097, imported during the year now under review. This commodity is rapidly finding its way into popular favor with all classes on account of its superior light-giving properties, and a large increase in its consumption may be expected. The Coreans put the empty tins to ingenious uses. They neatly cut the tin open, and either carefully flatten out the tin plates, using them for roofing purposes as well as the manufacture of a number of small articles, or, after carefully turning the edges of the tins, use them as buckets. Their cleanliness, lightness, strength, and durability make them in great demand for this purpose.

The import of Japanese copper increased by $8,504, whilst the native product from Yuensan was imported to the extent of 1,069 piculs, valued at $13,150.

An increase of $26,361 has also taken place in the value of the import of cigars, cotton lastings, nankeens, cotton thread, cotton wadding, cotton yarn, malt liquors, soap, flannels, woolen lastings, Russian cloth, provisions, saki and samshu, and sugar.

An addition of $11,576 is also due to the importation, for the first time, of alpaca, sheeting, woolen camlets and orleans, tin, licorice, and jewelry.

EXPORTS.

The total exports during the past year amounted to $154,898. The list of exports is small and confined to a few items. This is accounted for by the limited area from which by far the greater part of the exports is drawn.

The export of beans has almost collapsed, having fallen from 35,743 piculs in 1884 to 1,730 piculs in 1885. A large portion of this decrease is due to the bad harvest, but a part is due to the junk trade with Whanghaido providing a direct outlet for the surplus stock.

Bicho do mar has dropped from $3,585 to $461; nutgalls from $2,735 to $431, whilst the export of cotton and paper has entirely ceased.

The export of silk has practically remained stationary. The small amount exported is no criterion of the amount produced. The silk sent away from this port is of two kinds, yellow and white. The white is produced in the province of Kingsangdo in considerable quantities. The yellow is somewhat coarsely reeled, but parcels of it that have found their way via Japan to Lyons are said by the silk men there to be of a superior quality, and they are of opinion that if Corea produces it in any quantity she will, on the introduction of improved methods of reeling, be one of the richest silk-producing countries.

The export of rice, despite the comparative failure of the crop, increased from 744 piculs to 3,383 piculs. Corean rice always commands a ready sale, being superior in some respects to that of China or Japan.

The exportation of hides has increased remarkably, having risen from $60,951 to $132,583. The advance took place in the second half of the year, business in hides being very brisk consequent on an increase in the consumptive demand in the London market, whither they are shipped from Japan.

DRAWBACKS TO TRADE.

The trade of this port is hampered by many difficulties. The high cost of and the difficulty attending transport, which is at present carried on by bulls and pack-ponies, have a very deterrent influence on the expansion of trade. The mode of transit is not only slow and extremely uncertain, but it is so expensive that it limits the consumption of the imports of this port to the comparatively small radius of 40 English miles, and prevents districts more remote from sending their surplus stock of hides, silk, beans, cotton, millet, rice, &c., hither for export. The transport of goods from this port to Seoul by the cheapest means costs at least $3.50 per ton. The consequence is that an artificial boundary is created, beyond the limits of which but very small parcels of commodities find their way, so that the rich northwestern province cannot be supplied with foreign goods through legitimate trade, and its resources find an outlet by illicit channels, without the people or Government deriving those benefits which would accrue from a port being thrown open to commerce, with its healthy competition.

Another serious evil is constituted by the unceasing and often violent fluctuation in rates of exchange for cash. The exchange of this port will not infrequently show a variation in a few days of from 6½ to 33⅓ per cent. The constantly varying value of this currency has a very detrimental influence on trade. The rates of exchange are manipulated by the merchants, and, as a consequence, the Coreans have to bear the evils produced by a rapidly-fluctuating currency, which necessarily causes great irregularities in the prices demanded from buyers and serious inconvenience to them, although the market value of the goods in silver is unchanged. The financial trouble thus produced limits the purchasing power of the community and cripples trade.

The number of spurious Mexican dollars in circulation here is great. The counterfeit dollar is in many cases difficult to detect, owing to the rude workmanship of the original and the skill of the forgers. The Japanese yen is, however, seldom counterfeited, apparently on account of its careful and beautifully finished execution. The new mint when once established and issuing the new coinage, based on and similar to the Japanese coinage, should prove a great boon to Corean trade and eradicate the above evils.

The situation of the port is objectionable on account of the narrow limits of the inner harbor. The rapid silting up of the inner harbor has a detrimental influence on commerce, as it necessitates ships lying a considerable distance from the shore, and adds a heavy tax to merchandise in the shape of high lighterage charges, owing to the difficulty of landing and shipping cargo from and to vessels lying a mile and a half from the beach.

The want of a good jetty and the remoteness of the port from the centers of consumption are also to be deplored.

The extreme irregularity in the means of communication with other ports, or, in other words, the uncertainty as to the arrival and departure of steamers; the excessive, one might almost say exorbitant, freight rates hitherto charged; and the absence of means of overland intercommunication between centers of consumption and supply, are also serious hindrances to an expansion of trade.

THE IMPROVEMENT OF TRADE AND REVENUE.

The undervaluation of imports operates injuriously, in that it defrauds the revenue and renders competition in business often difficult. Appraisement by the customs bristles with difficulties even when aided by market reports, prices current, and samples of goods; and is nearly always unsatisfactory in its results, as the importer has the right of having his goods reappraised by an interested person, and then compelling the customs either to pass the goods at the reappraised valuation or to buy them in with the addition of 5 per cent. This purchase does not materially improve matters, as in small communities there is a difficulty in finding a purchaser for the goods. At present the revenue sustains loss by the declaration of low values and the production of bogus invoices, encouraged by the ad valorem system of levying duties. The change to a specific tariff would abolish this evil, would greatly facilitate and simplify customs work and the clearing of cargo, would do away with much unpleasantness and irritation consequent on disputes as to the value of commodities, and would favor the import of superior as against inferior qualities of goods, at the same time putting all merchants on a common footing.

This change, especially if carried out with a view of moderately reducing some of the heavier duties, would doubtless be beneficial to the revenue and afford a healthy impetus to trade.

If commerce is to flourish, especially the export branch, the spirit and letter of the treaty should be strictly enforced, and the various restrictions on inland and even coast trade at present existing should be abolished.

To aid the development of trade it is necessary to improve and increase the means of transport and communication, making both easier, cheaper, and certain in regularity, between the open and coast ports and the centers of consumption. This is to be effected mainly by permitting the traffic of large launches on the rivers, and by the use of small steamers, or fast lorchas, for the coast trade. By these means the cost of transport would be reduced to a fraction, the ultimate selling price of articles would be materially cheapened, whilst the work of distributing imports and of collecting exports at paying rates would be effectively carried out. The immediate result would probably be a considerable increase of imports, and that great desideratum, a large expansion of the trade in exports.

A tramway or railway between our port and Mapo, which presents no engineering difficulties, and might be laid down at a comparatively small cost, would be of great advantage to the tradal interests of this portion of Corea.

The deepening of the inner harbor by means of a powerful dredger, so as to enable vessels drawing 16 feet to anchor within a few hundred yards of the jetty, is to be desired. The material dredged up could be utilized for filling up the fore shore from the present jetty to Station Island, and as the ground thus reclaimed would add to the healthiness of the settlement, and would afford the most valuable building sites, its sale would partially recoup the Government for the cost of dredging, whilst the bund could be used for wharves.

THE OPENING OF NEW PORTS.

Since the difficulty of transportation, coastwise or inland, is one of the most serious obstacles to the growth of trade in Corea, it seems probable that the opening of more ports to foreign shipping would, by increasing the number of distributing centers and providing facilities for landing foreign goods nearer to the consumers, have the effect of largely augmenting trade. The ports which would seem to offer the best facilities for commerce are Pingyang in Pingan province in the north, and Mokpo in Chullado in the south, the former especially being a large town in the center of one of the best districts of Corea, where the soil is said to be fertile, the mineral wealth considerable, and the people more industrious and enterprising than in the southern provinces.

ALFRED B. STRIPLING,
Commissioner of Customs.

JENCHUAN, *March* 31, 1886.

FUSAN TRADE REPORT FOR THE YEAR 1885.

THE HARVEST.

The spring and autumn harvests were partial failures, the former from excessive rains when the wheat and barley were being secured, the latter from storms, rains, and insects destroying morethan half the rice-fields just at the time when the grain was ripening. The trade follows the harvest everywhere, but more especially so in Corea.

SHIPPING.

The increase of steamer tonnage is due to the fact that the Japanese mail company have run the Vladivostock steamer once every three weeks, instead of once every five weeks, and the steamer from Nagasaki to Jenchuan once a fortnight, instead of, as formerly, once a month from Kobe via Nagasaki.

The Hiogo Maru has taken the place of the Tsuruga Maru on the northern line, and the Mino Maru the place of the Seirio Maru on the Fusan-Jenchuan line, the new steamers on these lines being of larger tonnage and more suitable for the trade. The German steamer Hever called here three times *en route* to Jenchuan, but finally abandoned this portion of the route as unsatisfactory.

There has been a great falling off in the number of Japanese schooners visiting the port, especially during the latter half of the year. This is attributable to the decline in the export of beans, seaweed, and nutgalls, articles requiring cheap transport.

The junk trade is about the same, entirely Japanese, bringing wood, charcoal, and sweet potatoes from the island of Tsushima.

IMPORTS.

Cotton piece goods show a considerable increase over last year; this is accounted for by the failure of the cotton crop. In gray shirtings the increase amounts to 20,000 pieces over the preceding year, and in the other items of cotton manufacture there is a slight increase. The port supplies this province and the neighboring province of Chullado with piece goods, the demand for which would have been larger still but for the operation of the tax upon hides, as described below, thus contracting the purchasing power of the native merchants. The red shirtings are used mostly for the undergarments of the women and the uniforms of the soldiers connected with the yamêns.

There was a falling off in Victoria lawns—used especially in making the outer garments of men and women—which arose from the enhanced prices and more limited means.

The increasing demand for cotton yarn and thread is owing to the gradual giving up of the cultivation of cotton, a precarious crop at all times, but especially so in this wind-swept peninsula.

Woolen goods.—These are decidedly expensive articles to the Coreans, and it will probably be some time before there is much demand for them. The Coreans are very fond of blankets, which will form an increasing item of the trade of the port in the near future.

Camlets, it will be observed, figure as a distinct item for the first time in the trade returns.

Metals.—The quantity imported is less than in the preceding year, a good portion remaining on hand when the new year opened. The import of metals here is not likely to increase soon, the dealers from the capital preferring to purchase at Jenchuan. The serious falling off is in white metal, which supplied the local industry at the district city, Tongnaipoo, celebrated for the manufacture of pipe-heads and mouth-pieces, also metal bowls. A good many of the local workmen have recently left for the capital, hoping to find more regular employment there than the small district city afforded. The copper imported has usually been on Government account. A small quantity of sheets and slabs was, however, sold here; but lately there has been no demand.

Sundries.—Matches are of Japanese manufacture, and until recently have been of the poorest description. Now a new match has been introduced by some Japanese merchants, which sells fairly well. A large stock is on hand and stored in the godowns of the settlement.

There has not been the same demand for aniline dyes as there was in the previous year, owing, I presume, to our bad harvest; but should the demand increase there is abundance of stock to meet it in the hands of the merchants.

EXPORTS.

The export trade for the period under review is extremely unsatisfactory, as might be anticipated when the depressed condition of the agricultural interests is taken into consideration; besides, the many encumbrances under which trade labors in this

country are more than enough to kill it. That it survives and in fruitful years flourishes, shows the tenacious desire of the people to engage in trade, and how profitable to the people and beneficial to the country the trade would become if it were relieved from monopolies and other disadvantages.

Cow hides.—During the first half of the year a good many hides were brought in, but later it was found that the war department had issued instructions, levying on each city, according to its rank and population, a tax of hides varying from three to fifteen, payable monthly to the local officials, which, however, did not much interfere with the number for sale until towards the close of the year, when the special officials appointed to collect them found that only the smallest and poorest hides were brought to them in payment of the tax; consequently these officers have placed guards on the principal roads and boats at several points in the harbor to stop the hides coming to market unless certain taxes are paid. The result is that few, if any, are now brought in and put upon the market. The number of hides for sale must always be limited and will vary little from year to year, as the cattle are killed for beef solely.

The Japanese merchants here are thus greatly inconvenienced, for it is by the purchase of hides with the copper cash received in payment for piece goods that they have hitherto made remittances to their principals in Japan.

Beans.—The export of beans in the first half of the year was from the surplus crop of the previous year. The yield in 1885 was a poor one, the crop having suffered from the depredations of a worm; and owing to the scarcity of rice, all cargoes of beans arriving by the Naktong River were stopped, and the export prohibited.

Nutgalls.—The excessive rains of summer destroyed all prospect of a crop. This is the second year of failure in a crop that promised in 1883 to become an important article of local export.

Raw silk.—When raw silk in Japan commands a high price, Corean silk is purchased by resident merchants and shipped to Japan. Corean raw silk is not appreciated in Japan; it is unevenly twisted, soft, and quickly wears out. During the year little was exported.

Gold and gold dust.—About 5 miles from Masanpoo alluvial gold is found in a small valley. Shaft-like wells are sunk from 15 to 25 feet, and the earth thus extracted is washed at a small rivulet by women, who pick out the specks of gold found therein. When the water finds its way into these shafts and can no longer be bailed out, the shaft is abandoned and a new one sunk. These alluvial gold washings have been carried on hitherto by a Corean company of small capitalists, who employ, when they have cash, about 60 men and 300 women. The gold thus obtained has usually found its way into the settlement in payment for many articles.

Last year an official at the capital paid into the yamên which has the supervision of mines a large sum in copper cash, for the right to all the gold found in the valley alluded to; and since his arrival the wages for digging and washing the earth have been reduced; consequently little gold has been forthcoming, and none of late has been brought in for sale.

Copper ore is also found close to this valley, and Mr. Umaki, a Japanese merchant of enterprise and capital, is trying to develop the workings, having erected a small smelting furnace adjoining the settlement; but he greatly complains of the want of energy in the people of the valley.

FISHERIES.

The fishing season is, I regret to say, again a failure. The long ribbon-like fish, so popular amongst the Coreans, appears for the second season in succession to have deserted the coasts, which this year is all the more keenly felt owing to the deficient harvest.

The season for these fish begins in the tenth month and lasts until the end of the second month; when the catch is good, the fish are slightly salted and sent to all the inland markets within three or four days' journey of the coast, giving profitable employment to quite a large number of people. This is a branch of industry that might be very largely extended, and where judicious government assistance might be well employed in aiding the fishermen to obtain a better description of sea-boat and supplying a few Japanese or Chinese fish curers.

The Corean coast abounds in a vast variety of excellent fish, which might be turned to most profitable account in the markets of China. We obtained some excellent salmon in the early part of December. While the fish are not large and not in great quantity, they are of very fine quality. Fine codfish and herring followed in January. The coast fishermen cannot at present keep the sea in anything but calm weather, owing to the unseaworthiness of their crazy boats. This and their ignorance of curing fish properly cause the harvest of the sea to be very much neglected.

REVENUE.

The revenue for the year shows a considerable increase over that of the previous year, more so than a comparison of the figures in the tables will prove. The revenue for 1884 was collected in copper cash and converted into dollars at 500 cash to the dollar; but that of the year now being reviewed was collected in hard coin, and is in reality about $8,000 over that of 1884.

A careful comparison of the tables given in the annual returns will show that the imports have increased considerably over those of the previous year, while the exports have fallen off, which has already been accounted for; but on the whole the revenue has increased, and with a good year's harvest we may look forward to a largely increased trade in the fall of the present year.

SUGGESTIONS FOR THE IMPROVEMENT OF TRADE.

First. The total abolition of all monopolies.

Second. No tax of any kind or description to be levied inland on produce on any ground whatever. This is but reasonable, considering that the government receives through the foreign collectorate a very substantial revenue, to which before the opening of the country it was an entire stranger.

I may here mention that the taxes collected by the customs are neither oppressive nor inconvenient to the people.

Third. A license to be issued by royal authority to any one applying for it, to search for and work any minerals or treasures. When found, a royalty may be afterwards fixed upon.

Fourth. Freedom for the people to leave the kingdom and to return to it without let or hindrance.

I feel confident that if it is found possible to carry these suggestions into effect the eager desire to trade, which is so strong a characteristic of the Coreans, will be sufficient to develop fully the present resources of the country.

The quantity of arable land in Corea is very limited, and we cannot look for it to produce much more than the food necessary for the people; therefore the raw material of articles of a commercial value is not to be expected.

In the mineral resources of the country we may, however, confidently hope to find those articles of value to the world at large that will bring in exchange for them the riches and comforts of other countries, and so increase the happiness and prosperity of the people among whom we live.

GENERAL REMARKS.

The Japanese chamber of commerce sent a deputation with a large assortment of goods, mostly of Japanese manufacture, to visit the great fair held at Thaiku, the provincial capital, during the tenth moon. The reception and treatment of the deputation was not of such a nature as to lead to another being sent, and in a commercial point of view it turned out a serious loss to the merchants interested.

CLIMATE AND HEALTH.

During the past summer the weather was very changeable; consequently the general health of the residents was not so good as in previous years. In September there was a sudden outbreak of dysentery, when from thirty to forty Japanese were attacked, amongst whom six deaths occurred. At this time cholera was very prevalent in Nagasaki. The Japanese consul-general carried the instructions of his government into effect. All passengers arriving here were medically inspected and bathed, and their clothes were fumigated. The steamers and the cargoes brought by them were also fumigated, and occasionally kept in quarantine.

One decided case of cholera occurred in October. A Japanese passenger from Nagasaki landed here, supposed to be suffering from sea-sickness, went to the house of a friend for rest, when, the sickness continuing, the doctor was sent for, who at once pronounced it cholera, and had the patient removed to the cholera hospital, where he died in a few hours. The precautions of two months failed at almost the last moment to keep out the disease. I am pleased to state that this was the only case in Fusan. The Coreans in the surrounding villages were remarkably healthy.

The winter has been more than usually severe, and the pinch of hunger has been bitterly felt by the lower class. Should the present year prove unfruitful, sufferings amounting to absolute famine would follow We may, however, hope for a good season. The winter wheat looks well, and I trust the review of 1886 will be a brighter and cheerier one than that which I now bring to a close.

W. NELSON LOVATT,
Commissioner of Customs.

FUSAN, *February* 15, 1886.

YUENSAN TRADE REPORT FOR THE YEAR 1885.

The commercial year opened at this port, after a closed season of two months, on the 23d February, with the arrival of a Japanese schooner. The first steamer—the Japanese-mail boat, Tsuruga Maru—arrived on the 26th February, and the season terminated on the 26th December with the departure of the mail steamer Hiogo Maru. A Japanese gun-boat remained in the harbor throughout the winter, in anticipation of troubles which were expected; but the winter passed over without any disturbance as far as this port was concerned. Small quantities of floating ice were constantly to be seen in the harbor, and the southern corner was frozen up till the latter end of February, but at no time was there sufficient ice at or near the anchorage to interfere with shipping. After February, and to the end of the year, no ice whatever appeared in the harbor.

This port was opened to Japanese trade in May, 1880, but the custom-house was not established till November, 1883; it is therefore only over the period from the latter date that the customs statistics of trade extend.

The principal part of the trade in 1885 has been carried on by a Japanese mail steamer which called here from Japan, *en route* for Vladivostock, once every three weeks, and again on her return for export cargo; she entered twenty-seven times during the eleven months. Four steamers under the German flag and one under the British, engaged in carrying rice, go to make the total of 32 steamers, with a tonnage of 19,626, against 22, with a tonnage of 11,374, in 1884.

Of sailing vessels, consisting of Japanese schooners and junks, 13 have entered and cleared, with a tonnage of 1,000, against 12 in 1884, with a tonnage of 1,027.

The net value of the trade for the year is Mexican $564,052, an increase of Mexican $306,132 over the previous year. This remarkable increase comes entirely from the imports, foreign and native. Exports to foreign countries show a falling off. The gain in imports is the more satisfactory when one notes the adverse circumstances that have had to be contended with, in the shape of a failure in the rice crop in 1884, and a short yield during this year. Whilst the imported rice goes to swell the returns to a great extent, it will be noticed that articles of ordinary commerce also show a very substantial advance on the previous year. The improvement is due entirely to the more plentiful supply of gold; and although it does not appear in the returns as an addition to the value of trade, it is nevertheless to a certain extent a trading commodity, inasmuch as it is not a mere purchasing medium, or specie, but is sold and bartered at fluctuating prices, which generally leave a margin for small profits in passing from the hands of the exporter to the mint. The import trade is manifestly ruled by the outturn of the washings in this neighborhood. The quantity exported during the year is valued at $357,150, which is three times as much as went away in 1880. Of this amount, $272,315 were sent to Japan, $46,100 to China, and $38,735 to Fusan.

IMPORTS.

The net value of the imports from foreign countries is $375,673, against $151,738 in 1884, and the value of imported foreign goods actually retained in the port, after deducting the re-exports to native ports, is $372,200. Gray shirtings, as usual, take the first place in the returns of imports, and show a substantial advance over last year, with 69,735 pieces, valued at $199,618, against 24,344 pieces, valued at $73,487, in 1884. The average value of $2.86 per piece this year shows a falling off of 15 cents per piece on the value passed at this office in 1884; this is accounted for by the fact that new brands have been imported of slightly inferior quality, for the purpose of obtaining better profit. The old brands were sold at very low prices during the bad season, and being well known, it was difficult to get an advance on the reduced prices. Only a very small decline in the best goods has taken place. American shirtings were imported by the last steamers, and, I am told, went very well, after the first sales were made; and orders have been sent for more to arrive by the first steamer of the current year.

Victoria lawns show a slight advance over the returns for 1884, the import being 49,800 pieces, valued at $31,010, against 43,700 pieces, valued at $27,975. This trade appears to have a steady upward tendency, which is proved by the fact that so many more pieces were actually disposed of in the port than in 1884, when 5,860 pieces were re-exported to native ports, against 5,800 pieces during the past 12 months.

In dyed, brocaded, and fancy cotton piece goods no material change has taken place, and the trade has not yet developed into an important one.

Metals, which consist chiefly of Japanese copper and white metal, for making pipe bowls, show very little fluctuation, the whole value only reaching $7,510, against $7,190 in 1884.

In dyes and colors a decrease has to be recorded this year, their value having fallen from $7,496 in 1884 to $6,121 in 1885.

Wheat, which did not appear at all last year, has been imported this year to the ex-

tent of 3,418 piculs, valued at $5,960. Of rice, 45,789 piculs, valued at $100,475, were imported from foreign countries, against 2,890 piculs, valued at $7,667, last year, besides 22,769 piculs from the native ports; making a total import for 1885 of 68,558 piculs, valued at $158,957. This advance cannot be considered a matter for congratulation, and indeed the circumstances which rendered the large import necessary were to a great extent the means of reducing the value of the trade. Owing to the bad harvest in 1884, rice was imported late in that year and early in 1885 from Japan and Fusan. In May and June Japanese rice was sold for $5 per 100 catties. A German steamer arrived on the 18th June with a cargo of rice from Shanghai, and, although this was of an inferior quality, it was taken up rapidly at an average of $4.75 per bag of 145 catties. This steamer was followed by the German steamers Hever and Activa and the British steamship Ashington, with similar cargoes. From October to the end of the year rice was sold at $3 per picul for inferior and $3.50 for the best.

Of Japanese silk, dyed kaiki (lustring) shows an advance on last year, and finds a ready sale amongst the native ladies for their short jackets.

Kerosene oil shows a slight advance on last year, but is still a small import.

Matches of Japanese manufacture are imported, but are a small item, and are wretchedly bad.

Sulphur has advanced from 40 piculs in 1884 to 238 piculs this year.

EXPORTS.

Exports to foreign countries during the year are valued at $53,835, against $62,168 for last year, a falling of about 13½ per cent. This decrease is fully accounted for by the absence of cereals in the list of exports for 1885.

Beans, which have been a fairly large export since the opening of the port, and were sent away to the extent of 18,670 piculs in 1884, have been required for home consumption, and have not been exported during this year.

Cow hides have made good progress. The exports have reached 3,790 piculs, valued at $50,539, against 2,350 piculs, valued at $28,745, in 1884. This increase is the more significant when it is taken into consideration that there was no export during September, October, and November, on account of a disease amongst the cattle; but whether this disease was of an epidemic character is uncertain; however, it disappeared in December, and the trade went on as usual.

Dried fish was exported to Japan in 1884 to the extent of 5,756 piculs, against 494 piculs this year. Yuensan is essentially a fish-exporting port. The fish sent to Japan is a kind of sardine, which is dried and used for manure; it is netted in the harbor.

Musk has only been exported to the extent of 20 catties, against twice that quantity in 1884.

NATIVE IMPORTS AND EXPORTS.

The native produce imported during the year is valued at $75,780, and consists chiefly of rice and grain. The value of the produce exported to native ports is $62,247, which consists of dried fish, $27,891; grass cloth, $6,329; copper ore, $22,650. Cow hides were also shipped to Fusan, but were, presumably, for reshipment to a foreign country.

The carrying trade between this port and Fusan is greatly increasing, natives fully recognizing the advantages offered by steamers over their own craft.

Formerly a native junk was loaded up here, and started on a voyage to the south, and if she did not get lost and met with good luck, she might arrive back in the course of six months, with a cargo of some commodity that had been urgently required here at the time of her departure, but the demand for which had ceased in the mean time. Now, however, that a steamer service is available, produce can be shipped and the return cargo (if ready) received back within two weeks.

REVENUE.

The net revenue is $24,032.14, against $14,196.30 in 1884. There is a falling off of about $300 in the collection from exports, and an increase of $470 in tonnage dues, but the main increase is from the imports. This large advance has taken place in a year when the native products have been insufficient to supply the needs of the people; but it has not been derived from the increased importation of food, the bulk of which has been allowed to pass into the country free of duty.

THE WEATHER AND THE CROPS.

At not infrequent intervals during the year the state of the weather has given a very melancholy aspect to the prospects of trade, and even life has been endangered by floods as well as famine. To the end of March it was cold, with an occasional

snow storm; and from that time to the 18th May the season continued dry, when rain was most wanted for flooding the paddy fields and watering the nurseries. The consequence was that when the rain at length came no land was ready, it having been too hard for tilling; wherefore most of the rice was transplanted late. Thereafter seasonable weather prevailed till 19th July, when a most terrific gale of wind and rain, lasting for about 24 hours, visited the neighborhood; rivers overflowed, washing away all the bridges, flooding the flats for miles, and damaging the wheat crops. This was followed by an exact counterpart eight days after, completing the ruin that had been begun. After this heavy rains fell, with occasional blows. The panicum, millet, and bean crops had recovered themselves (except in places where they had been washed away) and were doing wonderfully well, so that there was, at least, a prospect of an abundant harvest of these. On the 5th September, however, we were again visited by a gale more severe than the two preceding ones, during which the flats became flooded with salt water, and the nearly ripe panicum, the chief and an unusually large crop, was washed out to the extent of at least two-thirds. There remained the rice crop, which at this time was looking tolerably well, to depend on to stave off famine for another year, and nothing but warm weather was wanted to ripen it; but the weather set in cold, and continued so for some time, till it seemed quite a chance whether the crop would not be a failure. Providentially, the warmth came, and a three-fourths' crop was the result.

THE IMPROVEMENT OF TRADE AND REVENUE.

One of the great drawbacks to the more rapid increase of commerce at this port is the monopoly of the natural product ginseng, and the limitations placed on its cultivation; and I feel sure that if the growing of it were more largely carried on and some of the present restrictions on the trade removed, so that ginseng might be dealt in openly, the result would be a great improvement in the general trade, by an influx of Chinese merchants to participate in it. During the three years the port was open before the customs was established, an annual export of about 2,000 catties took place; also, it left the country as at present via the Russian frontier, where it passes into the hands of Chinese, who deal in nothing besides deer horns and ginseng, which are shipped from Vladivostock. In this neighborhood there are thousands of able-bodied men who follow agricultural pursuits, and whose labor only requires one-eighth of the time at their disposal, who might be profitably employed in its cultivation. Seeing the high price which first quality Corean ginseng always commands in China, a high specific duty could be levied, and in time, I am convinced, it would become not only an important item in the returns of trade, but also a very valuable contribution to the revenue.

T. W. WRIGHT,
Commissioner of Customs.

YUENSAN, *January* 28, 1886

JAPAN.

Report of Minister Hubbard.

TRADE OF JAPAN IN 1886.

I transmit herewith the annual return of the foreign trade of the Empire of Japan for 1886. The total value of Japan's export trade for the year was 48,870,471 yen, and the total value of her import trade for the same period was 32,168,432 yen, being a total of import and export trade for the year of 81,038,903 yen, which is an increase of 16,601,510 yen over the total trade of 1885. The excess of export over import trade for the year under consideration was 16,702,039 yen. The following table shows a comparative statement of the total export and import trade for 1885 and 1886 between Japan and some of the principal commercial countries. The values in this table as well as all values in this dispatch are expressed in Japanese yen.

Countries.	1885.	1886.	Gain.
	Yen.	*Yen.*	*Yen.*
United States and Canada	18,340,052	23,347,202	5,007,150
France	8,065,777	10,963,815	2,898,036
China	13,418,518	16,718,758	3,300,240
Great Britain	14,827,399	16,898,603	2,071,204
Germany	2,129,585	3,178,117	1,048,532
Corea	469,114	1,392,763	923,649
East Indies and Siam	3,889,047	4,210,462	321,415
Australia	355,556	550,379	194,823

Exports from Japan to some of the principal commercial countries for 1885 *and* 1886.

Countries.	1885.	1886.	Gain.
	Yen.	*Yen.*	*Yen.*
United States and Canada	15,613,868	19,982,216	4,374,348
France	6,735,911	9,632,902	2,896,991
Great Britain	2,411,978	4,195,355	1,783,377
Germany	493,333	864,458	371,125
East Indies and Siam	492,083	649,143	157,060
Italy	120,598	181,200	60,607
China	7,655,468	9,594,907	1,939,439
Australia	284,235	469,914	185,679
Corea	229,600	829,316	599,716
Russia	246,291	231,695	−14,596
Austria	24,607	156,315	131,708

Imports into Japan for 1885 *and* 1886 *from some of the principal commercial countries.*

Countries.	1885.	1886.	Gain.
	Yen.	*Yen.*	*Yen.*
Great Britain	12,415,421	12,703,248	287,827
China	5,763,050	7,123,851	1,360,801
East Indies and Siam	3,396,964	3,561,319	164,355
United States and Canada	2,726,184	3,358,986	632,802
Germany	1,655,652	2,313,659	648,007
France	1,329,866	1,330,913	1,047
Corea	239,514	563,447	323,933
Belgium	317,682	507,908	190,226
Switzerland	306,234	263,446	−42,808
Italy	95,998	119,557	23,559
Australia	71,321	80,465	9,144

Of Japan's nearly 49,000,000 yen in value of exports it is interesting to note that the following twenty-seven articles form over 45,000,000 yen:

Articles.	Value.	Articles.	Value.
	Yen.		*Yen.*
Silk, all kinds	21,070,636	Fans	195,144
Tea, all kinds	7,723,320	Matches	378,017
Rice	3,300,599	Screens	193,124
Coal, including for ship use	2,208,548	Bamboo ware	191,271
Fish, including shell-fish	1,819,905	Bronzes	193,231
Porcelain	1,002,384	Hides and skins	216,852
Copper	2,130,880	Wheat	231,078
Camphor	928,027	Mushrooms	437,397
Lacquered ware	589,169	Kanten	392,604
Sea-weed	598,414	Bêche de mer	196,425
Straw ware	179,618	Peppermint oil	63,206
Cotton piece goods	229,665	Sulphur	72,938
Tobacco	126,612	Antimony	154,318
Rags	175,718		

The foregoing list includes only Japanese productions and manufactures. Re-exported foreign commodities have been omitted from it.

Of the 32,000,000 yen of Japan's import from foreign countries the following twenty-eight articles compose over 30,000,000 yen:

Articles.	Value.	Articles.	Value.
	Yen.		*Yen.*
Woods, woolen yarns, blankets, buntings, and other woolen goods	3,565,871	Iron—pig, bar, railroad, plate, and sheet	206,579
Kerosene oil	2,358,497	Steel and steel ware	2,079,233
Sugar	5,557,012	Other metal manufactures	568,511
Cotton yarns	5,905,457	Raw cotton	618,429
Hair, horns, hides, &c	1,061,799	Flour	99,156
Shirtings, white and gray	1,145,253	Provisions, including butter, hams, bacon, and condensed milk	361,800
Victoria lawns, T-cloths, and other cotton good	1,223,326	Books and pencils	169,480
Tobacco	93,098	Paper, all kinds	196,230
Wines and liquors	488,551	Clocks	88,589
Cannons, muskets, &c	374,491	Locomotives, and parts of	90,089
Medicines and chemicals	979,894	Watches	165,774
Dyes and paints	653,207	Hats, caps, &c	122,213
Glass and glassware	249,047	Machinery—mining, pumping, paper making, &c	459,584
Grain and seeds	103,146		
Iron nails	456,499		

The principal imports from the United States to Japan for 1886.

Articles.	Value.	Articles.	Value.
	Yen.		*Yen.*
Kerosene oil	2,358,497	Mercury	44,875
Leather	149,852	Cotton duck	22,789
Flour	97,454	Tobacco	29,316
Provisions	60,553	Watches and fittings	18,255
Condensed milk	57,102	Drugs, medicines, and chemicals	50,642
Books	53,230	Lead pencils	43,655
Clocks	81,331	Iron, and manufactures of	16,130

I beg to call your attention to the interesting fact that while the aggregate value of imports from the United States into Japan increased in 1886 over 1885, 632,802 yen, the gain on kerosene alone was 690,776 over 1885, the falling off being in such imports as leather, clocks, watches, &c., and several other articles, as a comparison of the tables of the years 1885 and 1886, respectively, indicates. The total imports from the United States for 1885, 2,726,184, while for 1886 the imports have

increased to 3,083,601. These figures speak for themselves, indicating the fact that while the balance of trade against the United States has not been decreased, American exports to Japan have increased in 1886 over 1885 more than half a million in value, to wit, 632,802. The demand, per contra, in America for Japanese productions has increased largely over 1885, the Japanese exports to America in 1885 being more than 15,000,000, while for 1886 it has swelled to over 19,000,000. We buy of Japan more than Great Britain does by 15,792,861; than France by 10,355,314; and than Germany by 19,123,758. The United States should and can sell more largely to Japan than now of the varied products of our soil, wheat, flour, &c., and the manufactures of our mills and the fabrics of our looms. The absolute cost of production and manufacture, the vast advantage in the distance of transportation by sea, should enable our people to place their goods in the Eastern markets at as low prices (certainly for the same grade of goods) as French, English or German manufacturers. Your commercial statistics of the trade relations between China and the United States shows the gratifying fact that American "piece goods" and cotton and woollen fabrics have found a ready and annually increasing demand in China. Why not in Japan, with her 38,000,000 of consumers, as well? I have had the honor to direct your attention to the fact heretofore that so far as concerns materials for railway construction, and bridges, and locomotives, &c. (and even our iron and steel rails can enter into competition with English and German rails if our people will only submit to smaller profits, as the latter do in their shipments hither), can successfully compete with our European rivals.

We have read much and heard more about "favorites" at court at this capital, so far as awarding of Government contracts for public works is concerned. Such intimations have boldly entered in the contentions of English merchants with their Government and are alluded to in official papers of the British diplomatic authorities in Japan. No such charges have been made by the United States diplomatic representative at this court, and yet while I have asked earnestly for my countrymen the sheer privilege in common justice and equity to openly compete for such Government contracts (such as railways and other public works upon which Japan is now entering largely), and while I have been told that an equal showing would be given to Americans, it has not been done, and the largest and most profitable contracts of the Government proper have been awarded to German, English, and French people. This in the face of the fact that I had, for our American iron men and railway constructors and civil engineers, assured this Government that they could and would not only duplicate all such contracts, but at a considerable per centum less than others had bid for them.

Nevertheless, the people of Japan trade with us by many millions more than with any other nation.

We consume nearly all her tea, and over one-third of all her silk, on which no duty is paid at our ports.

These facts and figures show that of the entire export and import trade of Japan with all the nations of the earth, the United States represents actually one-fourth of that aggregate.

"Other things being equal," therefore, on the score of equal inducements as to prices and qualities, we may unfortunately have cause hereafter to complain that reciprocity in trade, even when the conditions are the same, is ignored, while giving fresh assurances, on paper, of our long-continued and cordial friendly relations.

RICHARD B. HUBBARD.

P. S.—I have omitted in the foregoing dispatch to call attention to the fact that the Japanese customs returns speak of the "United States and Canada" as one; and that "East Indies and Siam" are put together. This is confusing, but as to the relative proportion of English and American trade it does not practically alter the status. "British India," as the Department is aware, is only a part of the "East Indies," while Siam no more belongs to Great Britain than Canada does to the United States.

UNITED STATES LEGATION,
Tokio, Japan, June 2, 1887.

OSAKA AND HIOGO.

Report of Consul Jernigan.

I submit the following report on the trade and commerce of this consular district for the fiscal year ending June 30, 1886, prefaced and followed with such observations as may be relevant to the subject of the report:

PRINCIPAL CITIES.

Osaka and Hiogo are not only the principal cities in this consular district, but are also two among the chief cities of the Empire of Japan. Osaka at one time contained more inhabitants than any city in Japan, and is now only second in population to Tokio, the capital. It has been for centuries the leading commercial city in Japan, and its central position enables it to maintain its commercial importance. According to the last census, there were 95,325 houses within the city limits of Osaka, and a population of 308,742. From the numerous canals intersecting Osaka, it is called the Venice of the East, and the Japanese sampan performs the office of the Venetian gondola.

Hiogo's importance as a commercial port is of recent date, for in 1868, when it was first opened to foreign trade, it was a small fishing village, scattered along the shores of the Bay of Osaka. Now it contains 24,268 houses and a population of 61,363. It is divided into two sections—one the native town, and still retaining the name of Hiogo; the other the modern settlement, and called Kobe. Within the boundaries of the latter is included the land conceded by the Japanese Government for the residence of foreigners, located in the northeastern part of the city. This section of the city is devoted exclusively for the residences of foreigners, and is under their municipal control, police and otherwise. Its wide and clean streets and beautiful buildings, all after the style of Western cities, have secured for it the name of the model settlement. The United States consular building is situated in that part of the city of Hiogo called Kobe, and in the most pleasant section of the foreign settlement, and about one hundred yards from the Bay of Osaka.

If the population of the country districts included within the prefectures of the cities of Osaka and Hiogo be added to the population of the latter, we have a total of 3,090,915 inhabitants in this consular district.

CLIMATE.

The climate is regarded healthier here than in any other part of Japan. There are four distinct seasons of the year, bringing about the

same cold and warm weather experienced by the inhabitants of South Carolina and Georgia, the only perceivable difference being in the dampness of the atmosphere, which appears to be more penetrating here. The health of this consular district is generally good. Last summer it was visited by the cholera, which left about 21,206 dead in the wake of its fatal march. But in other parts of the Empire where this disease appeared, especially at Tokio, the daily mortality was much greater than it was in this part. There were but very few deaths among the foreign population from cholera, and when these did occur it was ascertained to have been the result of imprudence. Another peculiarity of the disease was that it seldom invaded the homes of the better class of Japanese, but confined its attack to the lower class, known as coolies. The total number that died during the past summer from cholera in the whole of Japan is estimated at 101,695.

This is more than perished during the civil war of 1868–'69, when the office of shogun was abolished and the mikado became the *de facto* as well as *de jure* head of the Japanese Government.

TOPOGRAPHICAL ASPECT.

In this district, as in Japan generally, the land is mountainous and hilly, the level land, suitable for agricultural purposes, lying between the mountains and the bay. Towards Osaka and beyond there are some beautiful plains, fertile as gardens, and yielding large crops of rice and wheat, the principal products of this consular district. The small area of level land has forced the Japanese farmer to terrace the sides of the mountains and hills wherever possible, and from these inclined fields large crops of vegetables and cereals are gathered. The system of drainage seems to have been reduced to perfection in Japan, for notwithstanding the heavy rains during the wet season the crops are seldom injured, and the hillsides and plains present the appearance of rich and fertile gardens in a constant state of cultivation and production.

TRADE AND COMMERCE.

There have been such slight variations in prices here during the past season that the tone of the market may be stated to have ruled steady.

EXPORTS.

Table No. 1, annexed to this report, and showing the declared value of exports from this consular district to the United States during the four quarters of the fiscal year ending June 30, 1886, exhibits a healthy condition of trade, evidenced by the steady and marked increase of exports of each quarter, save one, over the corresponding quarters of the preceding year. The figures in the table are taken from the records of this office, and the values are estimated upon a gold basis. It will be observed that for the quarter ending March 31, 1886, there was a decrease in the value of exports of $94,053.87. If the total value of exports for the quarter ending March 31, 1886, be deducted from the total value of the exports for the quarter just preceding for the same fiscal year, ending December 31, 1885, there appears the large decrease of $262,416.01. If the same principle of subtraction be applied to the two similar quarters for the preceding year, there is only a decrease of $83,895.88. I have not been able to discover the cause for such a remarkable difference, and can only attribute it to the spasmodic elements

which sometimes disturb the course of business. But if we follow the table further and compare the total exports for the four quarters ending June 30, 1886, with the four quarters covering the same periods of the preceding year, there is an increase in favor of this year's trade of $910,055.74.

Tea stands at the head of the list of exported commodities, and though the prices in the United States have not been remunerative for buyers here, still the quantity exported is far in excess of former years. Owing to favorable news from the American tea market, large purchases were made during the early part of this (December) month. This advance in the price of tea may operate favorably towards increasing the supply for next season, but it is doubtful if prices will be higher than heretofore. There may be sudden advances in tea as in other commodities, but the prudent dealer will regulate his purchases and sales by the general tone of the markets, and not forget how the market may be affected by the large supplies now drawn from India and other comparatively new fields of production.

Camphor is another important commodity exported from this port. The table shows us that camphor to the value of $224,878.22 was exported to the United States during the last four quarters. The gradual destruction of the camphor trees in Japan must diminish the means of supply from this country and prices must necessarily advance here. The extraction of camphor totally destroys the tree. As observed in a recent report to the Department on the subject of camphor, there was once a custom in Japan that when a person destroyed a tree, another was immediately planted in its stead, but such a custom no longer prevails. The trade in Japanese curios continues good, and, as seen from the table, curios to the amount of $99,302.53 were exported to the United States during the four quarters of one fiscal year.

The most prominent curio merchants in this consular district, as well as the names of other prominent merchants, will appear under the proper heading in this report.

Our Table No. 1 shows us that the United States take from this port Japanese rice to the amount of $48,361.48, but rice is principally exported to Germany, England, and Australia, while silk cocoons, floss and raw silk, sulphur, tea, straw ware, and rags go mostly to the United States. Is it necessary for the United States to send to Japan for rice?

If we follow the subject of exports further and consider the quantity exported from this consular district to foreign countries as well as from the whole of Japan to foreign countries, it appears that this division of trade is in a satisfactory condition.

The annexed Table No. 2 will show the condition of this branch of the trade. The figures are taken from the latest custom returns, and the value estimated upon the basis of the Japanese silver yen, which is now worth 80 cents in gold, but the average value of which, for the past twelve months, has been about 77½ cents in gold.

The aggregate value of exports from this consular district to foreign countries during the fiscal year ending June 30, 1886, amounts to 9,635,208.60 yen, and for the same period of the preceding fiscal year to 7,445,120.69 yen, showing a balance in favor of this fiscal year of 2,190,081.70 yen. The exports from the whole of Japan are also comparatively satisfactory, for during the fiscal year ending June 30, 1886, these exports amounted to 41,877,576.58 yen, while for the preceding fiscal year they only reached the sum of 35,072,978.16 yen, showing an increase of 6,804,598.42 yen. It may be noted in this connection that nearly one-fourth of the entire export trade of Japan goes to foreign

countries from this consular district. Among the commodities exported from Japan, silk stands first on the list in value, with tea second, and grain and provisions third; these three articles amounting to 30,512,245.73 yen.

IMPORTS.

From the table of imports annexed and marked No. 3, a favorable view is presented of the trade in imported goods. This table and the values are based upon the same sources of information and estimates as Table No. 2.

During the fiscal year ending June 30, 1886, the imports to this port were valued at 8,520,822.11 yen, while for the preceding fiscal year they are valued at 9,851,503.73 yen, showing a decrease in the value by 1,330,-681.62 yen. The same decrease is marked in the value of imports to the whole of Japan, for during the fiscal year ending June 30, 1886, the imports were valued at 28,009,579.54 yen, while for the preceding fiscal year they are valued at 31,769,460.72 yen, showing a decrease in value by 3,759,881.18 yer

EXPORTS AND IMPORTS.

The theory that a nation was growing rich whenever its exports exceeded its imports is no longer contended for by political economists as an infallible criterion; but when a farmer or mechanic or merchant sells more than he buys, there no doubt arises a feeling of conviction that he is on the road to prosperity, and the balances given in Table No. 4 in favor of the export trade of Japan as contrasted with the import trade must be comforting to the Japanese Government. Comparing the two fiscal years, one ending June 30, 1885, and the other ending June 30, 1886, the export trade for this port during the latter year is 1,114,386.49 yen in excess of the import trade for the same period, while during the former year the import trade exceeded the export trade by 2,406,383.04 yen. Contrasting this trade for the said two fiscal years for the whole of Japan, the exports exceed the imports for the fiscal year ending June 30, 1885, by only 3,303,517.44 yen, while for the fiscal year ending June 30, 1886, the excess of exports was 13,867,997.04 yen.

In connection with the subject of trade and commerce, and for further information, I submit the annexed statistical tables.

These tables relate to the trade and commerce of this consular district, and are copied from the most authentic sources. The custom and trade returns of the Japanese Government are not of such a nature as to present a succinct and comprehensive view of the subject, and the difficulty of arranging statistics with clear intelligence and instituting desirable comparisons will be readily acknowledged when it is understood that the statistics have to be compiled from the trade pamphlets, issued monthly, and the compiler forced to make his own fiscal year. I have brought down the estimates to as late a date as possible, in view of the difficulties mentioned, which no doubt will be removed, as Japan is perfecting as fast as possible her system for imparting information on all important subjects.

TRADE RELATIONS.

The custom returns show that the value of goods imported from Japan by the United States exceeds the exports from the latter to the former in value about $12,000,000. This statement is unfair to the United States, for, at least, goods to the value of $4,000,000, which are

presented in the custom returns as being imported by the United States from Japan, do not stop in the United States at all, but go through to Canada. This, however, will leave a balance against the United States of $8,000,000. Whether such a balance is to continue against my country remains, I believe, with our own merchants. Certainly, if not altogether with them, at least in great part. Japan will, of course, trade with those nations offering her the better advantages, but as our country is nearer than any other Western nation it seems reasonable that our merchants might offer inducements favorable towards securing a larger and more lucrative portion of Japan's trade.

In a recent number of the *Choya Shimbun*—a leading and influential Japanese journal—the subject of the trade relations between the United States and Japan is referred to as follows:

It is certain that America will be the future market of this (Japan) country and therefore every obstacle in the way of the commercial prosperity of our two nations should be removed. Not only on account of our historical relations and old-time friendship, but also because of her geographical position is America the country to which the eyes of our countrymen naturally turn. Taking the size, population, and rapid development of the United States into consideration, it is not too much to say that it will be the world's future center of civilization. There is everything in America to excite our interest in commerce with her. We welcome her merchants and manufacturers here, and we shall be happy to see them compete successfully with other nationalities. If American traders take up this matter with courage and an enterprising spirit they will certainly be the rivals of England or any other nation.

* * * * * * *

Our (Japan) Government is endeavoring to follow Germany in the field of politics, military affairs, and engineering. England and France have long been the recipients of the Government's favors; while the foreign advisers of our administrations are taken chiefly from these three countries. We know not what secret motives the Government may have in so doing, but the Japanese people are far fonder of America than any other nation.

Another leading Japanese journal, the *Nichi Nichi Shimbun*, and often regarded as semi-official, says in connection with the same subject:

That it is our earnest desire that the trade of our two nations, America and Japan, will change for the better in the future.

The two journals named above are reliable exponents of public sentiment among the Japanese, and which they have expressed in no uncertain tone. The invitation has been cordially extended to our American merchants and it is time for them to come over here and rub up against the energetic merchants from Europe. No doubt but that the friction would be of advantage all around.

I have consulted with a number of foreign resident merchants in Japan and I find a uniformity of opinion among them as to the superior quality of American products, but there is great complaint about the high freights from America here.

I am assured that a box of goods can be shipped from New York City to Liverpool, then from Liverpool via Suez Canal to Yokohama, at a lower freight than it can be shipped direct from New York City via San Francisco to Yokohama. If such a complaint is to remain, it is quite probable and reasonable that merchants in Japan will continue to make their purchases in Europe, where they can be shipped to them at cheaper rates of freights, and such high freights on American goods are calculated to send the Japanese merchant to Europe, too, to make his purchases. It should not be forgotten that the productions of American farms and manufactures are produced upon a gold basis, while in Eastern countries the productions are produced upon a silver basis. Such standards of different values governing productions place Americans at

a disadvantage, and when to this is added high freights, they are rendered powerless to compete successfully with European merchants, who, though having the same gold standard, are favored with lower freights. It is subtle factors underlying commerce that make the losses and gains in trade. With steadiness of prices in the money markets of Western countries and lower freights from America, commerce with the East will be more inviting to our countrymen.

PUBLIC WORKS.

Among the important Government works in this consular district the mint, situated in the city of Osaka, is regarded as of great interest. It was opened for the reception of bullion from the public on August 4, 1871, and has been in successful operation, excepting short intervals, ever since. It is supplied with the most improved modern machinery and superintended by experienced and able officers. According to the last report there were employed 186 officials and subofficials, and 489 workmen and servants. This report is for the year 1885, and the gold bullion imported into the mint, of various description, during the year is 45,175.76 troy ounces. The silver bullion, of various description, is estimated at 5,239,705.54 troy ounces, and the amount of coin struck, both gold and silver, in this financial year has exceeded that of the last, the chief increase being in the one yen silver coin, of which 5,869,548 have been coined. This amount has never been produced during any previous year since the establishment of the mint. The total receipts of the mint since its commencement are 12,349,535,938 yen, and the expenditures 6,321,570.254 yen, showing a balance in favor of the mint of 6,027,965,684 yen.

Another important Government work is the arsenal, also situated in the city of Osaka. The arsenal was established in 1870, and the average number of workmen employed this year is 1,200, with wages averaging about 34 cents per day. The arsenal is supplied with first-class machinery, capable of manufacturing heavy cannon for coast defense, as well as medium artillery for attack and defense, and artillery of small caliber for field and mountain. Small-arms and ammunition are manufactured, too, with rapidity and skill. Its arrangement is systematic, and everything appears to be in perfect order.

One of the navy-yards of the Japanese Government is in this consular district, and is situated at this (Hiogo) port. It was formerly known as the Kobe Iron Works, which were established in 1873 by E. C. Kirby & Co., but was purchased by the Japanese Government in 1884, and is now known as the Imperial navy-yard, Onohama, Kobe. The number of workmen employed at present is 600. The yard itself has no dry-dock, but is capable of building or repairing any vessel except an iron-clad, and to enable the work a basin has recently been constructed. The workshops in the yard are as follows: Machine shop, fitting shop, smith and boiler shop, pattern shop, foundry, and rigging loft, together with wood and iron ship building sheds. The tonnage of the largest vessel built in the yard was 1,172 tons B. O. M., and the two war ships that have been built answer the following description:

Yamato-Kan.—Composite sloop; 1,476 tons displacement; 1,600 indicated horse-power; 15 guns; 3 iron masts; compound surface-condensing engine; 6 boilers; steam pressure 70 pounds.

Maya-Kan.—Iron twin-screw gun boat; 614 tons displacement; schooner rigged; 2 masts; horizontal compound surface-condensing engine; 700 indicated horse-power; 2 boilers; steam pressure 80 pounds; 4 guns.

PRIVATE ENTERPRISES.

The largest cotton mill with foreign machinery ever established in Japan was built in Osaka in 1882, known as the Osaka Hoseki Kwaisha Cotton Mills. The first mill contained 10,500 spindles, but these have now been increased to 32,000. The mill employs 1,200 laborers, and produces per week 270,000 pounds of yarn. All the machinery was imported from England, and is classed as number one.

The paper mill, purchased in 1877 from an English company by the American firm, Walsh, Hall & Co., is still in successful operation at this place. Improved machinery has been added since the purchase, and the mill is now in first-class order, and produces excellent paper. The building is of brick, and large and substantial, covering several acres of ground. The materials used are Japanese rags, and the machinery so perfect and systematized in its arrangements as to thoroughly cleanse the rags from every impurity. The average number of laborers employed is 200. The monthly consumption of coal is 300 tons; of rags, 250,000 pounds, with a production of 200,000 pounds of printing paper per month. The gentlemen composing this firm appear to be active business men, the head of the firm, Mr. Thomas Walsh, being a gentleman of long residence in the East, and of high attainments.

In this consular district the following are the principal American merchants: Those who deal principally in tea are Smith, Baker & Co. and Colgate, Baker & Co. General exporters and importers are: Walsh, Hall & Co., China and Japan Trading Company, American Trading Company, Meyer & Co., curios; J. D. Carroll & Co., and R. Isaacs & Bros.

The Japanese merchants are: Importers and exporters, Okura & Co., Kai Tsu Sha & Morimura & Bros., curios; Ohashi Shobei. The foreign banks are: The Hong-Kong & Shanghai Banking Corporation and the New Oriental Bank. Native banks are: Dai Ichi Kokuritsu Ginko (First National Bank), Mitsu Ginko, and Shokin Ginto (Specie Bank).

The above-named merchants and banks are graded high and considered sound and responsible.

Prices current in this market.

Articles.	Cost.	Articles.	Cost.
Heavy tweed.....per yard..	$2 50 to $4 00	Pork .....per pound..	$0 12
Twills and coatings.....do....	3 75 to 6 00	Mutton.....do....	22
Overcoatings .....do....	2 50 to 6 00	Veal.....do....	12
Fine cloth .....do....	3 75 to 6 50	Fruit...per case of 2 dozen tins..	3 00
Cloths bought by Japanese at wholesale.....per yard..	*1 10 to 1 80	Salt pork .....per pound..	14
Flour (200 pounds)....per barrel..	8 00	Salt beef .....do....	9
Beef.....per pound..	8	Rice.....per picul (133 pounds)..	2 75

* Double width.

The above prices are for staple and merchantable goods. Fancy goods bring higher prices. Now that the Japanese are adopting foreign styles in the place of their native costumes, I am informed that the market is growing more active. All the Japanese officials are required to wear foreign dress, and the rules of etiquette in dress are enforced with the utmost strictness.

The Japanese ladies are also changing their costumes for the dress and styles of Western countries. The tailors and millinery establishments in this city are working night and day to supply the demands upon them,

and the heads of these establishments tell me that there never was in their experience such a rush of business and mania for foreign dress.

Encouragement is given to the desire for change by the educated classes of Japanese, and some of the leading scholars and writers of the Empire advocate it as a means of promoting civilization and an agency in aid of the Government in carrying out its plans of reform.

CENSUS.

It is estimated that there are now 2,292 Europeans and Americans residing at Tokio and the open ports of Japan. Of this total 1,065 are British subjects, 447 are citizens of the United States, 269 Germans, and 201 citizens of France, the balance representing eleven other nationalities.

There are 210 foreign firms carrying on business, of which 91 are British, 46 United States, 33 Germans, and 18 French. The approximate number of Chinese residents is 3,876, and there are about 139 Chinese firms established in business. If the above figures be compared with the corresponding figures for 1876 and 1880, a considerable decrease appears in regard to European and American residents, but a very large increase in that of Chinese.

Within the past ten years European and American residents have fallen in numbers by 375, while the Chinese have in the same period increased by no less than 1,769.

This decline in the number of European and American residents must to a large extent be attributed to the diminution of the number of foreign employés in the service of the Japanese Government. The great majority of foreign residents in Tokio come under this class, and they have within the last year declined in number nearly two hundred. Another cause may be attributed to the falling off of business, or of its transfer from European to Chinese hands.

In 1870 there were 221 foreign firms established in Japan; in 1880 there were 258, while now there are only 210. There is no return of Chinese firms in 1876, but in the following year it was 53; in 1880 it was 102, and now 139. The term firm includes not only mercantile establishments strictly so called, but store-keepers and other commercial concerns of every description.

COMMERCIAL CHANGES.

There is much complaint among the merchants of the East of trade falling off, and various reasons are assigned. Some have been so sensitive as to set it down to the machinations of the Japanese Government. Others to the fluctuations in the price of silver. In this discussion it seems to have been forgotten that there are certain laws that govern trade as fixed and unyielding as the laws which govern the heavenly bodies. Whatever is essential to success to-day, other things being equal, may be equally as injurious to-morrow, and the failure to recognize this truth by merchants dealing with Japan is the true cause why they are feeling the depression complained of. They are not keeping pace with the spirit of progress, forgetting that the Japan of to-day is not the Japan of twenty, ten, nor even three years ago. They will have to get out of the old grooves in which they have moved for so many years, and remember that the Chinese "compradore" and the Japanese "banto" are characters of a past age of business.

The Japanese merchant is fast awaking to the importance of conducting business upon modern rules and principles, and he must be met with on the marts of trade as merchant meets merchant in Western

countries. Civilization carries with it new ideas, new duties, and new responsibilities, and Japan is advancing in civilization, and the old systems of business are being discarded with as much rapidity as the old customs.

The doctrine of self-interest, which the English philosopher declared governed the world, has its illustrations in Japan, as in other nations, for the Japanese are members of the same great human family.

As all advances in civilization tend toward the general good of mankind, so will the adoption of new business principles by the Japanese merchants bring Japan within easier and cheaper reach of the marts of Western trade, and as the United States is Japan's nearest Western neighbor, a larger share of the benefits and advantages likely to flow from the changed condition referred to should be shared by our own merchants.

EUROPEAN AND AMERICAN MERCHANTS.

European merchants, residents and non-residents, are more in the habit of consulting the taste and wishes of the Japanese than American merchants. They ascertain what style of goods suits and pleases the Japanese, and then give their orders accordingly to the home manufacturer. Such a policy has been successful and has resulted in giving to European merchants the greater part of Japan's trade. But the British merchant is slow to change his habits of business, while the German merchant adapts himself, with more readiness, to the changed status of business, and this is one reason why trade is being diverted from British channels and drifting in favor of the Germans.

There is, however, no cause for alarm among American merchants, for they occupy a position to-day in the East that is far preferable, and, if utilized, will bring with it advantages that will prove to be of a permanent nature. The goods imported from America are of a decidedly better quality than the goods in the markets of Japan imported from European countries, and Japan wants better goods now than she did several years ago.

Her advances in civilization will be attended with increased demands for superior qualities of merchandise. Of course, it may be expected that the merchants from other nations will be on the spot to note carefully every change, but it is an undeniable fact that American merchants have never yet put anything spurious or adulterated on the markets of Japan, and the high opinion entertained of American brands is fully proved by the Japanese constantly labeling their wares with the brands and names of our own manufactures.

In the great commercial chancery of the East I am glad to write that my own countrymen occupy a most creditable and honorable position, and having always done equity, they have the right to expect equity. It is no less pleasing to report that the merchants of the United States have a moral influence in Japan not surpassed by that of the merchants of any other nation in the world. But all these advantages will be of little avail unless our merchants will come to Japan, or send experienced and reliable agents, and meet the Japanese merchant face to face and learn his wants. Reports on trade and commerce are useful, but those engaged in mercantile as well as other pursuits can never be practical nor successful unless they live and move and have their being in *medias res*.

JAPAN'S REFORMED POLITY.

In the modern annals of Japan there are two changes of great interest to the student of political history, and which have exerted a salutary influence upon the internal and external polity of the Empire.

The first was brought about by the revolution of 1868–'69. For cen-

turies prior to the revolution the mikado was only in theory the head of the Japanese Government. He was never seen by his subjects, but was venerated by them as a God-descended ruler, without spot or blemish, and infallible. And though an absolute ruler he seldom took any part in the administration of the affairs of his Empire. This was all intrusted to an officer called the shogun, whose capital was four hundred miles from that of the mikado's, and who was practically the sovereign of Japan. During this period there were numerous feudal chiefs in Japan, known as daimios, each being supreme within the territorial limits of his province, but ruled and dictated to by the shogun. Such a system of government for a country closed against all communications from the outside world could only be attended with dissensions among rival daimios which constantly disturbed the peace of the Empire, and fostered and encouraged a spirit for military enterprise only. The pursuits of peace were neglected, and when peace came it was the peace of despotism.

The above outline of the form of government existing in Japan prior to the revolution of 1868–'69 is given in order that a more intelligent idea may be presented of the radical changes wrought by it. These went directly to the bottom of the old system and uprooted it. The mikado came out from his seclusion, became the actual and temporal head of his Government, moved among his subjects, and presided over his councils of state, like other enlightened rulers. The office of shogun was overthrown, feudalism abolished, and every vestige extinguished, and there arose upon the ashes of these old systems a strong centralized government. But this new order of things did not last long. The Government, though different and better from the old, was not in accord with the advanced civilized ideas entertained by the Japanese people, and a second change was decreed in December, 1885. This change was not so sudden and astounding as the first, but is more comprehensive, and afforded irrefragable proof of Japan's steady advance on the highway of political progress. The structure of the Government, as now constituted, consists of an Emperor, the minister president of state, the cabinet, and the senate. Of its new features the most important and radical is a well-defined partition of legislative and executive authority, hitherto combined, theoretically at least, in the person of the mikado, but now, by his own decree, separated in such manner that, while the executive power remains in the hands of the Emperor, the initiative of all legislation is handed over to the cabinet, the sovereign's share under the latter head extending only to the power of sanction. Next in importance to the Emperor is the minister of state, who leads the cabinet, fills the office of chief adviser to the Emperor, and exercises a large measure of authority over the whole executive. The cabinet consists, besides the president, of nine ministers of executive departments, and each minister is directly responsible to the Emperor for all matters within the limits of his competence. The senate possesses little or no real power, and is purely a consultative body, consisting of forty members nominated by the Emperor. It is powerless either to originate or veto measures and its functions limited to the discussion and elaboration of such matters as the cabinet may choose to refer to it, and to suggest modifications of details. It is only an humble and irresponsible auxiliary in the work of government. Each minister has the right to communicate personally with the Emperor in council on questions in which he is individually responsible.

The Parliament promised in 1890 is looked forward to with great interest. Its meeting will be an era in Japan's history, but it is believed that the nation will be equal to the occasion. The Parliament will be

constituted after the legislative branches of the English and German Governments, partaking more of the character of the latter, to guard more securely the supremacy and personal rule of the mikado, and to prevent the cabinet being too much dependent upon a parliamentary majority.

TAXATION.

Having adverted to Japan's reformed polity in its relation to the organic structure of the Government, it will now be proper to refer to it in connection with such subjects as are more closely allied with the masses of the people, and a change in the administration of which is more sensibly felt by them. Under the government of the shogun taxation was not uniform in Japan. Each daimio had his own system of levying and collecting taxes within his own province. Land bore the largest proportion, and taxes were usually paid in rice. In some instances they were very oppressive and barely left the tenant enough for subsistence. The heaviest rate I have ever seen recorded or heard of was $\frac{7}{10}$, and the lightest $\frac{3}{10}$. Between these there were various other rates, such as $\frac{4}{10}$, $\frac{5}{10}$, and $\frac{6}{10}$. In addition to this want of uniformity in taxation, the measurement of the land varied also in different localities, though such variations were perhaps unavoidable under the feudal system; but when the whole country was brought under the authority of a single government it was impossible to continue to subject the people to inequalities, and in view of this fact the Government undertook, in 1873, to reform the land tax, and in 1875 abolished over a thousand descriptions of miscellaneous taxes which had been levied under the former régime, and from this time the whole people were brought under a uniform law of taxation. Most of these miscellaneous taxes yielded but little revenue, but they were parts of a troublesome system which, had their enforcement been continued, would have left the impression in the minds of the people that they were still being oppressed. To remove all grounds for such an impression was one of the main causes leading to their rapid abolition, and it has had the desired effect. Subsequent legislation has tended, more and more, to perfect and equalize the system of taxation in Japan, and the most enlightened and just laws on the subject are influencing such legislation.

JAPAN'S PROGRESS.

Notwithstanding Japan has within the last several years invested largely in public works and made large expenditures for navy and army purposes, the financial condition of the Empire is good. This is clearly shown by the readiness with which the moneyed men of the Empire invest in Government bonds. These bonds are largely and eagerly sought after, and some time ago, when the minister of finance, under the sanction of the Emperor, issued several millions of bonds in the interest of the navy, there was some apprehension felt that they would not meet with ready sale, but it proved groundless, and the financial strength of the Government was fully sustained.

Navy.—To-day Japan has as many as twenty war ships capable of fighting on the open sea, some of which are constructed after the most improved scientific models and would prove formidable rivals to the finest ships in the naval forces of Western nations. Several of these war ships have been built by the Japanese Government, in its own naval docks, and work is constantly progressing on these docks and every improvement in naval architecture is utilized.

Army.—This consists of thirty-six thousand men, capable of being largely increased from a population of 37,000,000. The geographical aspect of the country would seem to render the operations of cavalry upon an extensive scale impracticable and adapted more to the use of light field-pieces. Nearly all the harbors and the ports are overlooked by high hills and mountains, which could easily be converted into strong fortresses without great cost, so fine are the natural advantages.

Coast trade.—Prior to the restoration in 1868, the coast trade was entirely in the hands of foreigners, and Japanese were compelled to travel by foreign mail steamers, but, by the aid and encouragement of the Government, steamship companies were formed, and this trade is now in the hands of the Japanese and carried in their own ships. Steamers of the finest models, elegantly fitted up, and lighted by electricity and flying the Japanese flag, run between and to and from the different ports upon schedule time, and the number and business are daily increasing.

Railway.—Not a foot was laid in Japan at the date of the restoration, and the first practical idea the Japanese ever had of a railroad was that given at Kanagawa by Commodore Perry at the time of negotiating the treaty that unlocked Japan to the commerce of the Western world. Now the chief open ports are connected with cities in the interior, and new tracks are being laid and plans in contemplation that will, before many years, make it easy to travel to points that can only be reached by foot or the aid of the jiurikishaw, and bring back to the open ports, by the aid of steam, the agricultural and mining products that are now conveyed on the backs of horses or in small wagons pulled by coolies.

There are at this time in Japan about 312 miles 46 chains 11 links of railway.

Telegraphs.—When, in 1872, the telegraph poles were cut down by the native population it was evident that the non-progressive spirit which existed and governed Japan anterior to 1868 had not become extinct. At that date there was no such thing as a telegraph in operation, and for expresses the only available means were men or horses. It required days and often months to convey important Government messages from city to city and from the capital to the chief military points in the Empire.

Such difficulties have been overcome and all the most important cities and towns and forts in the Empire are able to communicate with each other instantaneously. In 1879 Japan joined the international telegraph convention and telegraphic communication with all parts of the world is an easy matter. There are now in Japan about 6,000 miles of telegraph, and this number is being yearly increased.

Post-offices have also been regularly established for the general public and private convenience, and in 1874 Japan joined the international postal convention, which increased facilities for communicating with foreign countries. A letter can be sent to any part of the Empire for 2 cents, while under the rule of the shoguns and daimios it often cost 25 cents to send a letter 366 miles, and then by any opportunity that might present itself. There are now about 51,181.26 English miles of postal lines in Japan.

Light-houses.—In the interest of commerce extensive improvements have been made in the system of light-houses, which were kept up at most important points even before the restoration. All that has proved of advantage in European and American models has been studied and put into practical operation by that branch of the Japanese Government whose special province it is to superintend this important and useful system for the protection of life and the advancement of trade. In ad-

dition to the numerous buoys and beacons and harbor improvements already carried out and in contemplation of perfection, there are, to this date, 58 light-houses in Japan.

Education has not been neglected. The statesmen of Japan appreciate the importance of educating the people, as every resource for this purpose is being called into active operation. Up to the restoration there were but few schools in Japan. These were supported by the daimios, and were subject to the caprices and whims of these feudal princes. In fact, there was no regular system of education. But now universities, high, middle, and primary schools are established in all the provinces, and the means and facilities for education are being rapidly placed within the reach of all. This may be regarded as the best evidence of the permanency of Japan's progress. And I observe that wherever these schools are numerous the natives appear to have a more enlightened look and to carry themselves more erect and manlier. There are now in Japan 5 universities, and over 28,000 high, middle, and primary schools. There are over 68,000 teachers, and over 2,500,000 students. Special attention seems to be given to the promotion of educational facilities and a desire to learn to pervade all classes.

Laboring classes.—No class of the Japanese people have been benefited more by Japan's reformed polity than the laboring classes, for no part of the population carried heavier burdens under the old régime.

It appeared that the laborer had no privileges which anybody was under legal obligations to respect. His all belonged to his immediate lord, the daimio, and his life would be taken for any fancied insolence or insubordination. There was no power to restrain the hand of a daimio when raised against his vassal, and no appeal from his decree, however cruel or unjust. The will of the daimio was both the court and the law, and the laborer had no redress against his superior. There were no courts in which to prefer his complaints. The tribunals which are the enlightenment and boast of our Republic, and before whose bar all men stand equal, were not known to him. However much the laborer may have suffered or been wronged, he was compelled to bear in silence the unjust oppression. The slightest murmur and the sword of the executioner ended his career on earth forever.

He had no place that he could call his home, for even in the midst of his growing crop he could be forced from the premises without a protection from the pitiless storms of petty despotism. The title to all land was in the daimio, subject to the paramount ownership of the mikado, whose title to the whole of Japan was supreme. Such was the condition of the laboring classes in Japan when the last of the Tokugawa shoguns was compelled to surrender an office which had been filled for 250 years by members of that family, but passed from it and was abolished by special decree in 1868.

All this disregard for right and liberty has materially changed. Courts have been established throughout the Empire, and the lowest can prefer his complaint against the highest and have it adjudicated in the presence of his countrymen. Every wrong can be redressed by legal measures. Force is no longer law, and the tenant can compel the landlord to perform his part of the agreement. The poor as well as the rich can own land, and protect their homes against unjust invasions. The enlightened policy of the Emperor has carried sunshine to the hearts of his subjects, and thrown around them the strong arm of just and equal laws.

As but a few years have elapsed since Japan entered upon her new career of progress, the present condition of the laboring classes cannot

be expected to be as good as could be desired. This class is still poor. It may be said, emphatically, that there is great poverty among the lower classes in Japan, the inheritance of long centuries of superstition and despotism. With a population of 37,000,000, living on an area of 150,000 square miles, two-thirds of which are mountains and hills, unsuited for agricultural purposes, labor will continue, for a long time, to be cheap and abundant. A good laborer can be hired for 15 to 25 cents per day, and he will work from 6 a. m. to 9 p. m. and board himself. The laborer don't wear many clothes and often appears in a suit that would excite the envy of the staunchest dude.

In Japan's progress, other and newer fields will present themselves for the employment of Japanese laborers, a subject of primary consideration for those in authority, for unless some outlet is found, native or foreign, labor will be without employment, which has ever been a disturbing element to the peace and prosperity of nations.

A laborer's house is mostly one story and contains not more than two or three rooms, in addition to a small room each for cooking and bathing purposes. The floor of the rooms is about one foot from the ground and covered with soft thick straw mats, which are kept very clean, for the Japanese always take off their sandals or clogs when entering the house. Furniture is not used at all in a real Japanese house, except a small table about a foot high and fifteen inches square, which is only called into requisition at meal time, the family sitting on the mats like tailors on their benches. The bedding consists of soft, thick, cotton quilts spread on the mats. A laborer's house, including everything connected with it, will not cost more than $100 in gold. In such houses ventilation and warmth seem never to be considered, for the paper partitions and slides are only protected in cold and stormy weather by strong wooden shutters, fitting badly, and through which the wind and rain find little difficulty in entering. And there are neither stoves nor grates in such houses, for the materials employed in building are so inflammable that it would be dangerous to use them. In the place of stoves and grates there are braziers filled with heated charcoal, and at night the brazier, when the weather is cold, is covered with a kind of earthenware and placed under the quilt, the latter being protected from the fire and heat by a wooden grating. Though labor is cheap in Japan, and its reward discouraging, though the laborer is unfamiliar with the comforts which surround the home of the workingman in my own country, I believe that the Japanese laborer is the happiest and best contented being I ever saw. If his pan and cup are filled with rice and tea he appears the very embodiment of happiness, and over all the ills of life "victorious."

The agricultural implements, as well as machinery of almost every description in use by the Japanese, are of the most primitive origin, but attention is now beginning to be directed to the advantages of modern inventions, though labor is still so cheap and abundant in Japan that such inventions have not yet been received with remuneration in the markets, and there is not any sufficient demand to stimulate shipments of machinery and agricultural implements to this country, except to fill special contracts. The outlook, however, is more encouraging than in former years, and a nation that is fast becoming an important factor in the commerce and diplomacy of the world must soon afford a market for the appliances of modern civilization.

T. R. JERNIGAN,
Consul.

UNITED STATES CONSULATE,
Osaka and Hiogo, Japan, December 27, 1886.

BRITISH INDIA.

CALCUTTA.

Report of Consul-General Bonham.

I submit the following report of the trade and industry of British India for the year ended March 31, 1886, that being the end of the fiscal year to which the statistical reports of the Government of India, just published, have reference.

AGRICULTURE.

The past year throughout India generally has been ordinarily seasonable, and the yield of most of the agricultural production adapted to its soil and climate have at least come up to the average of previous years.

WHEAT.

From what I consider reliable information, I conclude that the area devoted to wheat in British India for the year under review was about 27,392,742 acres, and the total yield 288,938,496 bushels, or an average of 10.5 bushels per acre. The quality of Indian wheat as compared with that of our Pacific coast, with which I am familiar, is, I think, materially inferior to the latter. The Indian grain is not so large or plump or fair colored as the wheat of our Western States. I know that the bread made from Indian wheat flour, which I have used here, is of darker color and inferior in quality to that made from American flour.

I am advised, however, that the Indian wheat which is exported to Europe is mixed and ground with wheat of a superior quality, by which process a fair marketable grade of flour is obtained.

The method of cultivating the soil and harvesting and thrashing wheat in this country is, in the main, the same as it was centuries ago; and from the conservative disposition and caste prejudices of the native ryot (farmer) there seems to be great difficulty in inducing him to invest in modern agricultural implements, or to do anything differently from the way his father and his father's father did before him, and, in fact, there is not, owing to the extreme cheapness of agricultural labor, the necessity for improved and labor-saving agricultural implements and machinery in this country which exists in the United States and many other countries. Here the tiller of the soil leases a little patch of ground, consisting ordinarily of about 5 to 10 acres, and with his rude plow, often little better than a forked stick with an iron point, he hitches on to his small pair of bullocks and scratches over his patch, which he sows by hand and covers with a bamboo harrow or drag constructed like a ladder and dragged crosswise. He reaps his grain with an old-fashioned sickle, and tramps it out with cattle, and winnows it by pouring it through the air when there is a sufficient breeze, or, if not, he creates the breeze with a rude kind of hand fan.

And yet, with all his simple and primitive methods, I am compelled to admit that the Indian farmer can, in my judgment, successfully compete with those of the United States in the production of wheat. Strange as it may seem to many, the mystery is solved when you take into consideration the facts that the Indian farmer's entire farming outfit rep-

resents a capital of not more than $40 or $50, and his hired help (if he should require any) can and does work, feed, and clothe himself, according to the Indian fashion, for an average throughout the wheat-growing provinces, on about $2.50 per month.

The native day laborer in India, either at farming or other unskilled employment, does not seem ambitious to get rich or even financially independent. Of his wages, as above stated, I would judge that he expends about $2.40 for food, consisting principally of rice and dall, and occasionally some fish, and the balance, I would conclude from observation, is invested in clothing and incidentals. This condition of things when there is a failure of crops, as sometimes occurs from extreme drought, results in those great famines of India which occasionally occur, in which many thousands of these poor creatures die from starvation.

The following table shows the total exports of wheat from India for the past nineteen years, and will, for convenient reference, be of interest as showing the entire history of wheat production in India so far as it has become an article of export:

Years.	Quantity.	Years.	Quantity.
	Cwt.		*Cwt.*
1867-'68	299, 385	1877-'78	6, 340, 150
1868-'69	275, 481	1878-'79	1, 044, 709
1869-'70	78, 208	1879-'80	2, 195, 550
1870-'71	248, 522	1880-'81	7, 444, 375
1871-'72	637, 009	1881-'82	19, 863, 520
1872-'73	394, 010	1882-'83	14, 144, 407
1873-'74	1, 755, 954	1883-'84	20, 956, 495
1874-'75	1, 069, 076	1884-'85	15, 830, 754
1875-'76	2, 498, 186	1885-'86	21, 060, 519
1876-'77	5, 583, 336		

The following table shows the aggregate imports of wheat and flour into the United Kingdom of Great Britain from the several countries named for the past five years:

Years.	From Russia.	From United States.		From Egypt.	From India.	From other countries.	Total.
		Atlantic ports.	Pacific ports.				
	Cwt.	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*	*Cwt.*
1881-'82	4, 089, 308	31, 498, 568	12, 278, 094	1, 072, 182	7, 337, 924	12, 229, 238	68, 505, 314
1882-'83	9, 659, 079	26, 635, 657	16, 302, 322	177, 115	8, 463, 174	16, 060, 806	77, 296, 152
1883-'84	13, 398, 047	23, 982, 160	13, 417, 060	1, 173, 019	11, 248, 988	17, 248, 669	80, 467, 943
1884-'85	5, 496, 839	22, 808, 579	10, 168, 952	1, 000, 704	7, 980, 951	14, 945, 372	62, 401, 457
1885-'86	11, 986, 359	21, 899, 674	14, 107, 513	109, 983	12, 101, 963	17, 083, 501	77, 288, 993

I have referred thus fully to the subject of the production and exportation of wheat and flour from India and the other countries named, for the reason that I have observed—especially in the Pacific States, in view of the low prices which have ruled in wheat for several years past—an increasing anxiety with our farmers at home to learn the causes of the reduced market value of this important cereal, as well as the future outlook for its further profitable production. Some of my predecessors in this office have claimed in former reports on this subject that the United States had nothing to fear from India as a competitor in the production of wheat. I do not so view the subject. It is claimed that India is to-day second only to the United States in the quantity of wheat produced, and I believe that such is the fact.

And furthermore, there is no doubt, I think, that wheat-growing in India is yet in its infancy, and that its further development depends principally upon the means of transportation to the sea-board. British India has already in operation over 12,000 miles of railway, and during the past five years the average annual rate of the construction of new road has been 662 miles.

The Government of Great Britain is not content with being the great public carrier of the world, but she seems of late years to be possessed of a laudable ambition to produce her own breadstuffs as well, and I fear (however unpleasant it may be to contemplate the fact) that with the cheap native labor of India and the constantly growing facilities for transportation, we shall find her a formidable competitor as a producer of the "staff of life."

It should also further be borne in mind that the surplus wheat of India is now carried to Europe in steamships through the Suez Canal in three or four weeks, instead of going, as formerly, in sail vessels around the Cape, involving a voyage of three or four months and often material damage to the cargo from weevil.

KEROSENE.

There was a diminution in the quantity of kerosene imported during the year ending March 31, 1886, but imports are going on largely again since that period. The natives are now quite familiar with this oil, the cheapness of which (retailing in Calcutta at $1.30 to $1.50 per case) has caused its use to become quite general in the towns.

The attempts to find oil in the Borongo Island, near Akyab, in the Bay of Bengal, have been abandoned, and the oil brought down from Upper Burmah is used more for lubricating machinery than for illumination.

Attention has recently been directed to Beloochistan by prospectors for mineral oil, but it has not yet been satisfactorily established that it will produce the same in any very considerable quantity, and the quality of that so far found is said to be inferior. Although the Government of India has extended its encouragement to prospectors for mineral oil, yet it is generally conceded by all, I think, that for the purpose of illumination American kerosene practically holds the field.

If our Pennsylvania oil wells should become exhausted I do not know what our American shippers would do for outgoing cargoes to India, as about 96 per cent. of our total exports to this country consist of kerosene.

In this connection I mention the fact that by a regulation of the port commissioners of Calcutta, adopted during the past summer, no ship (American or otherwise) laden with kerosene oil is allowed to discharge her cargo above a point 16 miles below Calcutta proper, on the Hooghly River, known as "Budge Budge."

American ship-masters complain of the inconvenience of this arrangement on account of the remoteness of "Budge Budge" from their agents and consignees in Calcutta. On the other hand, the Calcutta port commissioners claim that the long line of ships moored at and below Calcutta, for a distance of about 4 miles to a point called "Garden Reach," would be endangered by the presence of oil ships in close proximity. Formerly ships laden with kerosene oil discharged their cargoes at Garden Reach, but a few years ago an American oil ship caught fire and the escaping burning oil was carried by the incoming tide up the river in a vast sheet of flame, thus threatening the long line of ships closely moored together between Garden Reach and Calcutta

proper with a general conflagration. It was this circumstance principally, I understand, which led to the new regulation above referred to

EXPORTS.

The exports from British India to the United States consist principally of jute and gunny bags, hides and skins, indigo, lac, saltpeter, and linseed.

Although India produces a superior quality of tea and a fair article of coffee, yet for some reason neither has been much exported to the United States.

It will be observed from the tables hereinafter submitted that the balance of trade between the two countries is largely in favor of India. Since I have been in Calcutta I have devoted a good deal of attention to the inquiry, which, I believe is considered a part of consular duty, as to how this condition of commercial affairs may be corrected. The commerce of a country, I understand, as a rule, is not considered to be in a very healthy or satisfactory condition when its imports largely exceed its exports. I find the fact to be that while nature's laboratory keeps lavishly pouring oil into the receptacles provided for it (as in the past), we can undersell nearly all the world in oil. But, on the other hand, I notice that when our people at home undertake to produce a manufactured commodity, the value of which depends largely upon the amount of skill and labor bestowed upon its production, they do not seem to be able as yet to furnish the same to the remote markets of the world at as low a figure as it can be procured from elsewhere.

Europe, with her steamships plying through the direct route of the Suez Canal, supplemented by her cheap labor, can furnish India with goods and wares of nearly every description, especially textile fabrics, on more favorable terms than they can be procured from the United States.

And this condition of things I have no doubt will continue to exist so long as the policy of protection of home manufactures prevails with us, instead of the other doctrine of a freer competition and the "survival of the fittest," which seems to obtain to a great extent in most of the manufacturing countries of Europe, as well as in India. But, in view of the fact that the absorbing question of the tariff in the United States does not seem to have become crystalized or materialized into any very definite form, I do not feel disposed to elaborate on the subject in a consular report, but content myself with a brief statement of the facts so far as they seem to me to have a bearing upon the condition of the commercial relations between the United States and British India.

As will be observed, my report on the subjects of agriculture and manufacture is not complete. The reason is that full statistics on those subjects have not yet been published, but are expected to be out soon.

I will supplement this report hereafter with such further information on the subjects of agriculture and manufactures as may appear to me to be of general interest.

Upon the several subjects of the condition of the mines, fisheries, and forests in India, on which a report is exacted by Consular Regulations, I have little to submit of special public interest. Coal mines are worked extensively and to advantage, but the precious metals have not been found in largely paying quantities.

The productions of fisheries are unimportant except for local consumption. There are plenty of both fresh and salt water fish in the waters of India of fair quality, and they are used quite extensively as

an article of food both by Europeans and natives. The forests of India are carefully preserved by the Government, and its teak is a valuable hard wood somewhat resembling our American black walnut and is extensively used for building purposes as well as in the manufacture of furniture.

The fragrant sandal-wood grows here and is extensively used in the manufacture of ornamental boxes and cabinet ware.

The bamboo grows in great profusion and the natives use it in many ways and considerable quantities of it are shipped to the United States and elsewhere.

The tabular statements herewith submitted have been carefully compiled and the values converted into dollars, reckoning the rupee at 36 cents.

Of the six consular agencies within my jurisdiction I have up to date only received reports from two, Madras and Bassein.

B. F. BONHAM,
UNITED STATES CONSULATE-GENERAL, *Consul-General.*
Calcutta, December 27, 1886.

The following table shows the aggregate trade of the ten largest ports of India for the year ended March 31, 1886, in the order of its amounts, including imports and exports:

Ports.	Amount.	Ports.	Amount.
Bombay	$299, 044, 293	Maulmain	$9, 720, 403
Calcutta	231, 413, 289	Chittagong	9, 491, 974
Rangoon	43, 149, 146	Akyab	7, 045, 922
Karáchi	36, 746, 188	Coconada	5, 990, 643
Madras	34, 504, 865	Tuticorin	5, 304, 506

The following table exhibits the value of the trade between India and some of the principal countries with which India has commercial connections, and the proportion of trade with each country to the total trade of India with all countries for each of the last three years. The countries are enumerated according to the importance of the trade with them in 1885–'86:

Countries.	1883–'84.		1884–'85.		1885–'86.	
	Imports and exports, merchandise and treasure.	Percentage on total trade of India.	Imports and exports, merchandise and treasure.	Percentage on total trade of India.	Imports and exports, merchandise and treasure.	Percentage on total trade of India.
United Kingdom	$312, 369, 296	5. 69	$302, 826, 139	5. 53	$304, 701, 195	56. 61
China, Hong-Kong	46, 632, 123	8. 37	44, 367, 561	81. 00	47, 899, 307	8. 74
France	33, 217, 802	5. 97	32, 002, 035	5. 84	26, 668, 299	4. 87
Straits Settlements	17, 273, 379	31. 00	18, 756, 323	3. 42	19, 404, 015	3. 54
China, treaty ports	15, 464, 091	2. 78	15, 385, 772	2. 81	18, 351, 945	3. 35
Italy	15, 557, 409	2. 79	14, 537, 675	2. 65	16, 374, 752	2. 99
United States	13, 074, 454	2. 35	16, 836, 535	3. 07	16, 138, 019	2. 95

The aggregate value of the trade under all heads for the last five years was as follows:

Years.	Imports.	Exports.	Total.
1881–'82	$209, 933, 514	$298, 797, 647	$508, 731, 161
1882–'83	228, 442, 311	303, 774, 205	532, 116, 436
1883–'84	236, 094, 676	320, 770, 324	556, 865, 000
1884–'85	241, 301, 371	306, 116, 384	547, 417, 769
1885–'86	242, 241, 772	305, 796, 439	548, 038, 222

Excess of exports over imports, including Government transactions as well as general trade and treasure as well as merchandise, for each of the last five years.

Year.	Amount.	Year.	Amount.
1881–'82	$81, 474, 353	1884–'85	$46, 284, 748
1882–'83	68, 321, 929	1885–'86	49, 780, 848
1883–'84	75, 704, 708		

The value of the trade to and from India carried through the Suez Canal.

Years.	Amount.	Per cent. of the whole trade.
1881–'82	$317, 134, 039	61. 4
1882–'83	336, 333, 630	62. 2
1883–'84	372, 801, 357	65. 8
1884–'85	365, 544, 408	65. 6
1885–'86	381, 319, 394	66. 2

Principal articles of merchandise imported, according to their importance, during the year ended March 31, 1886.

Articles.	Value.	Articles.	Value.
Cotton goods (including twist and yarns)	$87, 417, 462	Woolen goods	$5, 011, 701
Metals (including hardware and cutlery)	19, 956, 965	Coal	4, 710, 283
Railway plant and rolling stock	7, 565, 035	Liquors (wines, beer, and spirits)	4, 674, 590
Silks, raw and manufactured	6, 591, 444	Provisions	4, 290, 773
Sugar	5, 269, 189	Apparel	3, 734, 135
		Machinery and millwork	3, 569, 591
		Oil (mainly kerosene)	3, 460, 067

Principal articles of merchandise exported during the same period.

Articles.	Value.	Articles.	Value.
Animals, living	$362, 443	Oils	$1, 424, 026
Articles of food and drink	88, 955, 938	Raw materials and unmanufactured articles	11, 246, 352
Metals and manufactures of metals including hardware and cutlery	165, 320	Articles manufactured and unmanufactured	31, 405, 879
Chemicals, drugs, medicines, narcotics, and dyeing materials, &c	55, 856, 061		

SHIPPING.

Total number and tonnage of the shipping which entered and cleared at Indian ports from and to foreign countries during each of the last five years.

Years.	Number.	Tons.	Average tonnage.
1881–'82	12, 742	7, 368, 886	578
1882–'83	11, 715	7, 071, 884	604
1883–'84	11, 602	7, 250, 603	622
1884–'85	10, 338	6, 649, 770	643
1885–'86	10, 562	7, 294, 589	691

The figures for vessels entered and cleared, which are given together in the foregoing table, are shown separately in the following table:

Years.	Entered.		Cleared.	
	No.	*Tons.*	*No.*	*Tons.*
1881–'82	6,460	3,632,248	6,282	3,736,688
1882–'83	5,864	3,538,878	5,851	3,533,006
1883–'84	5,812	3,632,305	5,850	3,618,298
1884–'85	5,150	3,291,009	5,188	3,358,761
1885–'86	5,253	3,640,687	5,309	3,653,902

These tables include sailing vessels as well as steamers.

The following table of steamers shows the progress made during the past five years in the substitution of steamers for sailing vessels in the carrying trade between India and other countries:

Years.	Steamers entered.		Steamers cleared.	
	No.	*Tons.*	*No.*	*Tons.*
1881–'82	1,829	2,263,604	1,859	2,310,372
1882–'83	1,550	2,050,515	1,544	2,050,459
1883–'84	1,620	2,294,810	1,603	2,277,232
1884–'85	1,495	2,157,501	1,489	2,174,680
1885–'86	1,631	2,361,942	1,632	2,397,828

Vessels under British and British Indian registry.

Years.	British.			British Indian.		
	Vessels.	Tons.	Average tonnage.	Vessels.	Tons.	Average tonnage.
1881–'82	4,861	5,856,677	1,205	2,868	411,400	143
1882–'83	5,207	5,306,770	1,261	2,525	361,189	143
1883–'84	4,196	5,508,676	1,327	2,601	347,849	134
1884–'85	3,791	5,208,966	1,374	2,345	297,326	128
1885–'86	4,136	5,770,169	1,395	2,198	304,544	139

Number and tonnage of the shipping of the principal nationalities other than British engaged in the trade, 1881 *to* 1886.

Nationalities.	1881–'82.		1882–'83.		1883–'84.		1884–'85.		1885–'86.	
	No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
Austrian	86	112,235	97	138,215	89	130,071	78	136,942	78	137,846
Belgian	16	20,281	3	3,551	12	15,928	2	2,646	.....	.....
Dutch	13	9,699	5	7,655	39	42,241	92	95,846	127	150,080
French	226	140,843	219	191,084	231	286,683	188	212,039	170	176,835
German	124	112,329	238	213,495	178	163,081	156	160,771	200	205,629
Italian	247	230,643	281	281,454	217	248,608	107	143,904	126	164,788
Norwegian	80	74,544	130	107,538	74	67,248	75	63,402	78	63,541
Russian	12	12,502	17	13,512	11	10,275	3	2,628	2	798
Swedish	19	8,988	36	21,045	34	18,728	10	4,069	21	11,489
American	74	87,346	73	85,452	44	52,033	52	64,538	45	55,226
Arab	584	85,853	615	79,045	646	102,393	663	102,215	597	92,712
Turkish	20	14,876	12	10,315	11	9,041	20	9,053	9	5,670

CUSTOMS REVENUE.

The gross sum received on imports since 1882–'83, in the beginning of which year the import duties were abolished on all articles but salt and those shown below, was as follows:

Articles.	1882–'83.	1883–'84.	1884–'85.	1885–'86.
Arms and ammunition	$39,145	$52,921	$53,978	$60,746
Malt liquor	26,253	28,287	23,792	29,261
Spirits	1,273,046	1,278,756	1,241,973	1,307,068
Wines, liquors, &c	204,089	205,528	178,768	169,060
Opium	1,009	758	1,030	1,060
Imports by post, &c	8,434	6,089	202	475
Total gross revenue	1,550,978	1,572,334	1,499,743	1,567,616
Total net revenue	1,474,529	1,552,371	1,474,422	1,535,584

N. B.—Salt is excluded from these figures.

Export revenue for the same years.

Years.	Gross.	Net.
1882–'83	$2,906,323	$2,911,688
1883–'84	2,588,644	2,507,655
1884–'85	2,218,216	2,054,300
1885–'86	2,677,837	2,619,461

This revenue is practically all derived from rice, the trade in which revived after two very unfortunate years.

GOLD AND SILVER COIN AND BULLION.

Imports and exports of gold during the last five years.

Years.	Imports.	Exports.	Balance net imports.
1881–'82	$17,483,011	$44,668	$17,438,343
1882–'83	18,342,487	581,350	17,761,137
1883–'84	19,690,044	25,026	19,665,018
1884–'85	17,201,420	382,449	16,881,971
1885–'86	11,120,547	1,182,982	9,946,565

While gold has been leaving the country, or at least coming to it in greatly reduced quantity, silver, on the other hand, was imported in larger and exported in smaller quantity than at any time.

Imports and exports of silver.

Years.	Imports.	Exports.	Net imports.
1881–'82	$23,279,000	$3,914,420	$19,364,580
1882–'83	30,088,878	3,160,061	26,928,817
1883–'84	26,670,623	3,612,079	23,058,544
1884–'85	32,796,091	6,711,818	26,084,273
1885–'86	34,590,585	2,806,673	31,783,962

CEYLON.

Report of Consul Morey.

ECONOMY.

The 30th of June, 1886, marked the close of an uneventful fiscal year in Ceylon, during which no new reproductive public works were undertaken, though great efforts were made to reduce to a minimum the expenses of what might be called the unfixed establishments. The maintenance of roads and working expenses of railways were especially subjected to an economical regimen, which, it is greatly to be hoped, will not seriously affect their future efficiency. It is proper to state, though, in this connection, that there is much discontent, and many anxious forebodings are constantly expressed on account of what is called the make-shift plan of "surface patching" in the repairing of roads, in lieu of the old system of thoroughly reconstructing them once a year on the McAdam principle. No doubt there was room for economy in both of the above-named branches of public expenditure, for the cart traffic on roads has, owing largely to the construction of railways, diminished so considerably that the wear and tear of highways is more cheaply repaired now than formerly, and the diminishing traffic by railways gives an opportunity for a reduction of the somewhat lavish expenditure prevailing in that department in more prosperous times.

Though practicing a rigid and probably judicious economy in nearly every branch of public expenditure, the government has nevertheless wisely and liberally persevered in the restoration of those ancient irrigation works, of almost prehistoric antiquity, and undoubted usefulness.

IRRIGATION WORKS.

These, from various causes too numerous for enumeration here, had long since fallen into decay, and their very neighborhoods, once the homes of vast populations, the sites of grand cities, the seats of art and science, and the scene of a prosperous agriculture, had become, from abandonment and the naturally rapid progress of tropical growth on the one hand and decay on the other, comparatively uninhabited and pestilential localities.

To restore these great reservoirs and canals to a condition to contain and distribute in the dry season sufficient water to irrigate the many thousand acres of rich land, forming principally the magnificent park-like country known as the Nuwara Kalawiya and Tamankada districts, has been a set purpose in the minds of at least the latest two British governors of Ceylon, viz: Sir James Longden and Sir Arthur Gordon. For steadily carrying out so wise and humane a scheme, however, these two officials have been greatly blamed by the mass of their fellow countrymen in the island, who mostly regard Ceylon as only a "happy hunting ground," or pleasant resort for themselves, where native interests should be pretty much allowed to take care of themselves.

Probably the ultimate result of the reopening up of this beautiful and historic locality will prove the crowning glory of Britain's—upon the whole—beneficent rule in Ceylon; and it may one day be the boast and pride of her sons that a region found desolate by them, and which

in the dim past, when the natives of England were comparatively savages, was the home of civilization and progress and a tempting bourne to greedy marauding. invaders from Asia and Africa, to which they repeatedly came for purposes of plunder, and, impelled probably by religious hatred, subjected the fairest land on the face of the earth to devastation, was restored, under British rule, to something like its former grandeur and usefulness.

Already, under a system of restoration, abundance has begun to prevail where an eighth of a century ago the greatest scarcity existed, and population is being rapidly drawn towards these once neglected districts. Paddy (unhulled rice), the favorite food of all Eastern people, which was hardly to be got there prior to 1880, is now so abundant that it may be purchased at Anuradhapura, in crop time, for ten cents per bushel, the same article selling meantime in Colombo for never less than forty cents, generally at fifty cents, per bushel; a difference in price owing entirely to the cost of transport, which can only be overcome by the construction of a railway—a project, by the way, fraught with no great engineering difficulties, nor considerations of excessive expenditure, and which the government now has in serious contemplation.

CONDITION OF THE COUNTRY AND PEOPLE.

During the year under report the condition of the country generally was good. There were neither floods nor droughts, famines nor epidemics. The old promise of "seed time and harvest" was fairly fulfilled, and most of the inhabitants were in the enjoyment of ordinary comforts, more so, perhaps, than was the case ten to fifteen years ago. when many people were wallowing in fictitious wealth, whilst others were starving. That was an unwholesome period; for values were so inflated that borrowers could and did obtain loans, on real-estate security, of immoderate sums of money, which was either reinvested alike immoderately or spent lavishly. As a consequence, when the period of depreciation came—probably reaching its lowest level in 1884-'85—much money was lost to circulation from the fact that about all the revenue accruing from the nominal ownership of real estate was absorbed in the payment of taxes, cost of upkeep, and interest on an excessive amount of borrowed money, which itself had also gone out of circulation.

Thus was created a terrible depression, especially within municipalities where the taxes had been levied on the basis of an immoderate valuation, and rated exceptionally high, too, to cover and provide for the cost of extravagant schemes (including the introduction of gas and water into towns), which it was considered the country was richly able to afford on a large and generous scale.

Mortgaged properties were especially afflicted by this excessive taxation, for their owners, after the fall in values occurred, could not easily pay taxes themselves, nor—as is mostly the custom here—get tenants to pay rent and taxes too. The selling of such property was also more or less retarded, and the value depreciated, from prudent would-be purchasers standing aloof and refraining from buying pending a moderation of the tax system.

Such a modification is being slowly accomplished now, and the value of real estate is enhancing correspondingly.

In the rural districts the native element (owing to a renewed disposition to cultivate grain) is fairly prosperous. There was a report at the beginning of the year that on account of failure of crops the people in one locality had not even seed paddy for planting, and were nearly

famishing. This, however, was denied by respectable people in the neighborhood, and whatever want was actually prevailing, the government, I believe, attended to and saw it properly relieved.

The condition of the European community has certainly greatly improved since last year, owing to, mostly, the establishment of the planting industry on the firm foundation of a system of various products; amongst which, tea and cinchona are succeeding extremely well. The health and general contentment of the people have also been good, though the population cannot be said to have largely increased. There is, however, a marked increase in the annals of crime, principally with respect to thieving, which is becoming very prevalent, owing, it is said, to an absence of any deterrent effect on crime in the prison system; the general belief being that prisoners are too mildly treated, or, what is worse, are even pampered in the jails. I, myself, have heard discharged convicts repeatedly say that they had been much better fed in jail than they ever were outside of it, and this might easily be in a country where such men only earn 10 rupees ($4) per month by honest labor and board themselves.

REVENUE AND EXPENDITURE.

The revenue for 1885 was $5,060,345, gold, or $6,325,431 in silver; and the expenditure was $5,044,483, gold, showing an excess of revenue over expenditure of $15,862, gold. Of this revenue $1,142,819 was derived from customs receipts, to which we may add $193,200 Colombo harbor dues, making $1,342,019; or nearly one-third of the total revenue a product of the foreign trade and commerce of the island. Railway receipts yielded $1,047,171, and licenses, principally to distill and sell arrack, rum, and toddy, $572,274. Land revenue, *i. e.*, principally a tax on grain grown in the country, yielded $417,375, and stamps, exclusive of postage, yielded $420,237.

What amount was derived from postage-stamps and other post-office receipts is not clearly stated in the government schedule, but it ought to be considerable; since the inland rates of postage are about the largest of any civilized country in the world, and the foreign, or beyond-sea, postage exactions, the maximum amount, I believe, allowed by the Postal Union rules. Notwithstanding the last-named fact, Ceylon is the worst-served country in the East with respect to ocean-carried mails; for, whereas, the Imperial Government of Great Britain, in contracting with the Peninsular and Oriental Steam Navigation Company for the conveyance of mails to India, demands a speed of 12 knots per hour between Suez and Bombay, it is content with 11 knots per hour between Aden and Ceylon. Consequently, it is not uncommon for letters addressed to Ceylon, from America or Europe, when missent in the Indian mail, to arrive at Colombo via Bombay one day in advance of letters of same date sent by the regular steamer to Ceylon.

Twenty years ago the revenue was $3,851,486 and the expenditure $3,670,680, showing a saving of $180,806; and he would be a bold man who asserted that the government was less efficiently conducted in those days than now.

The civil list of that period has since been multiplied, and the pensions and allowances of retired civil servants increased from $149,084 to $258,041, and as a moiety of the last-named sum is paid and spent outside of Ceylon it amounts to an onerous tax on the local inhabitants, more especially as the bulk of the pay of many civil servants, before retirement, is likewise expended out of the island.

FINANCE.

Financiering in Ceylon has now become a veritable puzzle. The fluctuations in value of the local currency have been constant and rapid, generally $\frac{1}{16}$ of a penny up one day and $\frac{3}{32}$ down the next, until the present value of a rupee is about 1*s.* 4*d.* This creates much mischief in the import trade by daily altering the value of foreign commodities, and inflicts hardships on family remitters, who are numerous, owing to the fact that the wives and children of many government servants, likewise of local merchants, reside mostly in Europe, and have to be supplied with funds from Ceylon. An unwholesome element of gambling is likewise introduced into the export trade, and a spirit of recklessness engendered not at all consonant with true commercial principles.

AGRICULTURE.

There is a steady improvement in agriculture throughout the island. The natives are growing more grain and the Europeans a greater variety of products than formerly. The demand for foreign farming implements, especially plows, so prevalent two years ago, has, however, about ceased, and will probably be inconsiderable for some time hereafter. Native cultivators are better satisfied with some primitive implement they can make and mend themselves, and after use cast aside carelessly, with which to scratch the ground, than with an elaborate and costly utensil, the very care of which, when out of use, would either be neglected or considered by them an intolerable burden. It is a mistake, therefore, to expect them to patronize largely farming implements the first cost of which would generally be beyond their means, and the use of which would force them into new methods of cultivation, which they do not desire to adopt.

In my judgment, the direction in which these people's minds should be turned for improvement is the protection and preparation of their fields for harvest with the appliances already at hand. It is common enough here for people living and owning land near small rivers to vainly sow grain for two or three years in succession, upon the chance of the season proving sufficiently dry to obviate the flooding of the land and destruction of the crop by an overflow of the river. A native Goya tells me, that sometimes not more than two in five of such sowings result in a harvest, and yet an easily constructed embankment or levee along the river front would effectually protect such land from inundation and render sucessful crops almost a surety.

To me it seems perfectly natural that a people who adopt such indifferent modes of husbandry should remain content to plow the land they so carelessly sow, with a pointed stick drawn by a cow; and until a more provident system of cultivation is taught them, their present implements, undoubtedly, are exactly what they require.

IMPORTS AND EXPORTS.

The imports for the calendar year of 1885 were valued at $17,052,935. Nearly two millions, say $1,720,000, included in the above aggregate was for coal and coke, imported mostly to supply the numerous steamers calling at Colombo and Galle daily for fuel. About $1,400,000 represents the value of the cotton goods (cloth yarn and twist) landed during the year, mostly from Great Britain, and $8,432,861 was for grain, principally rice, from India; $1,737,208 was in specie, likewise from India; and

the balance, consisting of almost of every known commodity, came from all parts of the world, though England may be credited with fully eight-tenths of it.

The declared exports for the same period were valued at $14,312,962, say about one million in excess of those of 1884; and by adding to this sum the value of gems deported from the country, say $1,000,000, and $1,500,000 worth of coal re exported, we have the balance of trade slightly in favor of exports, which is a happy consummation.

The principal articles of export were coffee, cacao, cinnamon, coinchona, coir, cardamoms, copra, cocoanut oil, essential oils, plumbago, and tea, which, together with other miscellaneous products, are fully scheduled in an accompanying table.

MINES.

Mining operations have languished throughout the year under report; the principal products of that industry, viz, plumbago and gems, having been in diminished demand abroad. There is also a report of local scarcity of these articles, owing to exhaustion of old fields and the enhanced impediments to labor, caused by a somewhat wet season. My own idea, however, is, that ready means for overcoming all such causes of local scarcity would be found were there to arise a brisk foreign demand for our gems and plumbago.

COMMERCE.

The navigation actually entering and clearing from the various custom-houses was, inward, 3,123 steamers and sailing vessels, reporting 2,000,878 tons, and outward, 3,145 steamers and sailing vessels, reporting 1,990,492 tons. Total, 3,991,372 tons, which might probably be increased to 6,000,000 tons by adding thereto the very large amount of tonnage calling and reporting only for coals, orders, and passengers.

Nearly nine-tenths of the total tonnage was represented by steamers and over seven-eighths of the whole was under the British flag. The contributions from other nations were, with respect to tonnage, in the following order, viz: France, Austria, Holland, Germany, Italy, Norway, Russia, Spain, United States, and Maldive Islands; the last two countries remaining as last year, singular with respect to the motive power of their vessels, all of which were sailers, whereas most of the ships of other nations were propelled by steam.

Germany will probably run France pretty close for tonnage here in the near future, as the North German Lloyd has now perfected its arrangements for dispatching its steamers to the far East and Australia.

By this new service, at least five steamers, over 3,000 tons burden each, will call here *en route* to and from the far East regularly; but at present it appears the Australian line will not touch here, their route being from Bremerhaven to Antwerp, Port Said, Suez, Aden, Maldive, Islands, Adelaide, Melbourne, and Sydney. From Sydney a branch line is proposed to be run to the Tonga and Samoan Islands.

Perhaps it is proper to here state that Germany is rapidly advancing her trade and commerce throughout the Orient, and even now her merchants are established on a firm basis in Ceylon.

At this present time of writing the most extensive cocoanut-oil mill and general products factory in the island, though owned in England, is under German management and control. The principal shippers of coffee are Germans; also of cinchona, I believe. Certainly one German

gentleman sends more of the last-named article to America than all the other merchants here put together, and his countrymen are very large importers, both from the continent of Europe and Great Britain, also from India.

The local market, in fact, is beginning to abound in German goods, especially tools, which are sold at marvelously low prices.

TRADE WITH THE UNITED STATES.

There was a falling off in trade with the United States during the year, the imports direct having amounted to only $22,028, and the exports to $835,970, whereas in 1884 they were $39.408 and $942,537, respectively. The imports were 15,431 cases kerosene oil and 1,546 pounds cordage.

There were also 33,000 cases of American kerosene from India, value $48,293, making the total of this commodity 48,431 cases; value, $70,221. This amount will, however, be greatly increased in 1886, as the imports to date, viz, September 30, are 93,650 packages, valued at $136,155. About 64,536 pounds of American manufactured tobacco, valued at $20,200, came from Great Britain and India, and 118 cwt. of salt beef and pork (American), valued at $2,128, came from England. I trace also some bacon, cotton goods, and clocks to an American origin, and conclude, upon the whole, that about $100,000 worth of our goods were, directly and indirectly, imported during 1885, which is a poor showing.

The exports to the United States were valued at $835,970, showing a decrease from the previous year of $106,567. This is more than accounted for by the falling off in plumbago, which in the previous year amounted to $376,500; whereas in 1885 it was only $219,563.

The shipments of cocoanut oil, amounting to $450,000, were the same as in the previous year. Such was likewise the case with respect to essential oils; but there was an increase in the value of coir yarn and fiber of $11,368, the total shipment of that article having amounted in value to $30,373.*

W. MOREY,
Consul.

UNITED STATES CONSULATE,
Colombo, October 1, 1886.

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*The statistics contained in the above and foregoing were obtained from the undernoted departments, to the responsible officers of which I am deeply indebted for much courtesy, viz: colonial secretariat, customs department, master attendants (Colombo and Galle), government printer, and Ceylon Chamber of Commerce.—W. M.

STRAITS SETTLEMENTS.

Report of Consul Studer.

When, in May last year, I left my post of duty to enjoy for a few months a much-needed leave of absence and recuperation, the state of local trade and commerce, considering the steadily growing depression of the local silver legal-tender currency, was on the whole pretty fair, and it was thought that silver had gone down as far as it would go (the silver dollar then was quoted at 3*s.* 6*d.* sterling) and hoped that a rise in its value would no doubt take place. This hope was based chiefly on our own national legislature, *i. e.*, that it would provide by statute for a continued and increased coinage of silver dollars. This expectation was not realized and when I returned to my post in February, I found a general depression, in some respects almost a stagnation, in trade; that is to say, export, of the usual articles of Straits produce, being in the main necessities of life, continued about as usual or even with increasing tendency, but in imports, well established and indispensable articles excepted, there was almost a stagnation, and this state has continued to this day.

And what, will one ask, might have been the principal cause of this depression in commerce? To my mind's eye the answer is not difficult. First, let it be remembered that a monometallism of silver exists throughout British India and British Crown colonies of India, of the rupee, and in this colony of the dollar. The Mexican, Japanese, Hong-Kong, and the (in our country defunct) American trade dollar are legal tender for all debts public and private. All goods imported from Europe and the United States and all countries having a gold standard or a bimetallism of gold and silver have to be paid for as per invoice in gold (sterling, United States currency, marks, francs, &c.), at the ruling rates of exchange, or, better said, quotations of silver established by the banks. The equivalent of a dollar in gold is about 4*s.* 2*d.* sterling. The local silver dollar was worth that much fully when I first came here in 1871 (and until about 1873–'74) and trade flourished; the laborer and employé knew that wages paid them were as good as gold, dollar for dollar. The importer in making prices for the sale of his imports had a reliable standard to go by; it was not a fictitious or hazardous valuation, as now it is and, in a measure, must be to be safe. If his invoice called for £1,000 sterling, he could buy a draft for that amount, payable on demand, at the rate of 4*s.* 2*d.* per dollar, silver (or get a little more whenever there happened to be a dearth of silver dollars in the market), add a reasonable profit to the invoiced price and put the goods in the market, and the purchaser or consumer could buy with his dollar 4*s.* 2*d.* worth. The laborer, servant, mechanic, or employé in earning a fixed amount per day, week, or month, or year, had the satisfaction to know that the silver dollar paid him would suffer no reduction in value. It was just about as with us in the United States before the issue of greenbacks and after the resumption of specie payment, a dollar was a dollar of firm fixed value of 100 cents, gold or silver.

Without referring to the records and relying on remembrance, I think it was (about) early in 1874 when silver commenced to depreciate to 4*s.* 1½*d.*, next to 4*s.* 1*d.*, 4*s.* ½*d.* 4*s.*, fluctuating a little up or down, but actually going backwards little by little as time went on, the banks being guided in quotations by the amount of dollars in coin in the mar-

ket (none being coined here) and by the London silver market (this market ruled like a rod of iron, the local colonial and the home Government not interfering), until, on my return from leave in February last, it had gone down to 3*s.* 4½*d.*, and, since then, it continued going down until at one time, not long ago, it had reached 3*s.* sterling (72 cents, gold). Then it "picked up" a trifle, gradually, by ¼*d.* and ½*d.*, so as to be about 2*d.* higher.

This shown, I want to next show what, in my opinion (the public press does not mention it and it knows why!), brought on the depression of trade. If the colonial government had enacted a law to the effect that while this uncertain state of fluctuating currency lasted, all employers (the government making the beginning), taking the standard of 4*s.* 2*d.* per dollar, should pay the employed the difference in value between gold and silver, added to the stipulated wages in silver (for instance, a laborer hired at $6 per month to receive at the end of it, in addition, the difference between the ruling rate of sterling exchange and 4*s.* 2*d.*, say the difference between 3*s.* 4*d.* sterling, 80 cents gold, and 4*s.* 2*d.* sterling, $1 gold, which would make for $6, $1.20 or $7.20 silver for the month), all would have been well and trade would have flourished as usual. This was not done for the public generally, but was done for persons in the British national service receiving their pay in sterling (army and navy and certain civil employés), who had payments in silver made to them charged to them, approximately, at current sterling exchange bank valuation. The mass of native laboring population (coolies, house servants, coachmen, gardeners, boatmen, artisans, and native employés, clerical and otherwise) experienced only in rare instances improvement in wages; indispensable or old faithful servants, for instance, or upon grounds of an employer's charitable feelings.

The usual rate of native laborers' wages, artisans and clerks not included, before the value of the silver dollar depreciated, was in 1874 on an average about $6 per month, food not included, and continued to be about the same to this day. Persons paid higher wages fared at about the same ratio. At that time the necessities of life of the native laboring masses, no matter what they consisted of, were ever so much lower than they got to be through the overawing difference between gold and silver; the people lived much better, were happier, and could afford to dress better and appear to better advantage than they do now (to me and others at least). Native traders in very nearly all articles of necessaries of life (fruits and vegetables to some extent excepted) charged, as well as they could and dared, the difference between gold and silver in their dealings with natives (and most assuredly with the European residents, full difference). Owners of houses raised the rent to all classes alike, about pro rata of station (getting all they can consistently); and now as to goods imported from Europe, America, &c., as the invoices for the same called for payments in gold strictly, the difference between gold and silver in placing them in the market had to be added at existing exchange rate, with an allowance for downward fluctuations, together with the profit to be earned.

The textile fabrics mostly in vogue with the natives, both sexes, and indispensable to them, consisted of bleached and unbleached muslins, sheetings, drills, prints, sarangs, handkerchiefs, and a few minor items (all depending on race, religion, and costumes). These imported goods they had to buy at vastly enchanced prices, owing to said causes, out of their scanty normal wages. The consequences of such a state of affairs must be patent to any one—one need not be a financier to see them, viz: the laboring man and employé, first of all, had to buy the

necessary food for himself and family, if he had the latter, out of his depreciated wages (the average loss from 1874 when depreciation commenced to this day on a dollar, silver, I may safely put down at 15 per cent.), and devote the scanty balance to the payment of house rent and clothes, if any was left, to that which was strictly and absolutely necessary. Such a state of affairs, as may be easily guessed, has the tendency of forcing people to run more or less in debt, regardless of frugality and saving. The native laborer or employé, when he stands in dire need of money, if he cannot get it from friends, must get it from the native money-lender, prominently the Chitty, a Hindoo caste; and of all the rapacious usurers and hawks anywhere in existence, I believe he has not his equal. (I have in former reports devoted space to that worthy, and will not repeat what I said.) When once in that fellow's clutches, "he cannot contribute much to the trade of the port." But I must mention it, because an unusually large number of native people, with steadily increasing tendency since the silver depreciation set in, became involved in debt, the majority of them hopelessly; and besides, the pawnbrokers were reaping a rich harvest. (The latter is a licensed institution here. What next?) Just this, that when a large proportion of consuming debtors cannot pay their creditor, the small trader or hawker, he is driven to the wall—collapses; and when retail traders cannot pay the jobber or "middle trader," as we call him here, and leave poor or no assets, he, in turn, cannot pay the importer—the European firm that sold him on credit—and has to go into bankruptcy, and his creditors must be satisfied with what the court finds to accord to them. The latter—the European—may get over it, but it hurts him; it does not build up, and he generally prefers to say very little about it.

There have been many bankruptcies of middle traders, some for very large sums, of late years; among them men (mostly Chinamen) who were believed to be very wealthy and safe. The credit system is forced to draw its coils constantly tighter; money is close and commands a high rate of interest in discounts of well indorsed or strongly secured documents at the banks at from 10 to 12 per cent. Enterprises to a great extent are stifled—much talked about, but amount to little or come to nothing. A few years ago when times were good and money plenty and easy, and the native population from all parts of the East increased, real estate went up and a great many houses were built, finding then ready takers. Visiting to-day the native quarters and suburbs, especially new streets, opened and graded a few years ago, and lined with good new houses, one finds an unusually large percentage of them unoccupied—closed up—a sure sign of bad, depressed times.

With an impoverished native population of hundreds upon thousands of people groaning under the weight of poor wages, dearer food, and a depreciated silver currency, received under the circumstances above alluded to, battling with life as they do, and exacting land-laws as well; with a monometallism of silver uncontrolled by the government, and, so to say, only by London quotations and the local banks (chartered banks), and the constant fear of a European war falling like a wet blanket over all classes alike, &c., how can times, trade, and commerce be good? As stated, only those articles of import which are an absolute necessity find sale with slow payments. Resident Europeans and native people, regardless of religion, following or imitating Western civilization, form comparatively only a small portion of the population. Any portion of articles of luxury, or bordering on luxury, or of comfort or of superior quality and make, or suited to them, imported and remaining unsold after supplying the demand, stands a poor chance of sale, and, as a rule, goes to

the auctioneer to be sold under the hammer, for the natives would not buy them.

In former years Europeans and natives following Western civilization used to be sumptuous in comparison with present times and buy things that now find but few buyers. Those were the times of great bargains, good profits, plenty of money, of well-to-do, generous hospitality, with refinement and displays regardless of cost. As I look back, the present appears to me to be the mere shadow of those times, and yet the cost of living is ever so much higher than then. The native masses deserve great credit for remaining so quiet and law-abiding, for holding out so patiently in more or less wretchedness in the hope of better times and "bigger silver." A strike, such as we hear of or meet with in our country, is a thing unknown here, and only "miniature strikes" by house servants, gardeners, and plantation coolies, when they think they have become so indispensable to their master as to command 50 cents or $1 more per month, and they, as a rule, end harmlessly and satisfactory to both parties.

But, will one ask, if there are no strikes, do bad times not breed crime? Yes, they do, whether caused by depreciation of silver, monometalism, or anything else. Some years ago the old prison, occupying a large space of ground (three or four acres, I think) in the heart of the town, on rather low-lying, level land, was not only found unhealthy (became so in the course of time), but too small in view of the increasing number of convicts and the fast increasing population, and a new prison, with larger, better, and stronger buildings, on a larger and higher lying piece of ground, was built and occupied about three years ago. It stands on an isolated piece of high ground, presenting a fine, commanding appearance, looking from a distance like a town by itself. It was then thought that this would answer the requirements for many years to come, and in point of strength and interior arrangements I believe it does answer, but not in that of size, for it is now pretty full, and so alarmingly many convictions take place constantly that it is already now feared that it will soon be too small. The majority of the convicts are Chinamen of the lower classes (laborers), convicted chiefly for theft, also housebreaking, cheating, and more serious crimes. My opinion, based upon long experience and a very fair knowledge of the place and population, is, that bad times, want, hunger drive a good half of the convicts to jail; that many offend against the laws in order to be convicted and sent to a place where they are sure to get their daily bread for a time. Stripes with a rattan, as proposed in the colonial legislature, to deter Chinamen from becoming convicts and thereby to reduce public expense, might have that effect in a measure. But many of the convicts are opium-smokers and beggars (*i. e.*, incredibly poor, if not beggars) at the same time; and as the Government farms out the right to sell opium in the colony, deriving therefrom the largest revenue, it must after all find it natural, if the number of convicts is on the increase and rattan stripes wouldn't cure the mad cravings of a confirmed opium-smoker. The drug is very dear, and when a poor laborer given to the vice of opium-smoking must find the drug, and food, clothing, and an abode in which to live out of from six to eight dollars per month, something or some one has to suffer for it besides himself. In jail he cannot get it.

After this preamble upon the state of times and imports from civilized countries, the American business man will naturally ask, How does it fare with regard to imports from the United States? All things considered, not so badly after all. Let it be remembered that, as I have

pointed out in about all of my commercial reports to the Department since 1871, there is not a single American firm in the colony of the Straits Settlements, so that such of our merchants and manufacturers as are anxious to introduce and establish a market here for their products must trust to local European firms to be their agents. Now these firms, as I have repeatedly reported, will, upon receipt of catalogues and price-lists, buy nothing outright, send no order, but the majority of them are willing to receive consignments to try the market and report results, and if they can report that an article found favor and is in demand, they may send an order at the same time, or else explain that it cannot be sold and why. Now, some firms are much better than other firms (some by great odds) for introducing new goods; and therefore if a merchant at home desirous of introducing his products out here has no reliable local correspondent, he had better write to the consul and request him to put him in communication with one or more firms, and otherwise give him desirable information. Now, I can say in truth that I have answered during my long residence here a great number of such letters, and in many instances answered and advised to send out a small trial consignment to a firm that appeared to me commendable, and that in a few instances my advice was followed and generally resulted in creating orders.

This not sending trial consignments, when advised to do so, is a mistake, and the consul's time, labor and postage, burdened as he is with multifarious and laborious duties, is thrown away. Some of them wrote that if they could consign to the consul himself they would do so; and where a consular officer is allowed to trade and is an American citizen, it would, no doubt, be the correct thing to do; but where he is not, he is not allowed to be an *agent*, nor any one for him, and it is well he should not be, since it would reduce his influence and standing.

Under existing circumstances, as stated, the United States have not fared badly in imports here, and, fortunately, were some of the articles indispensable ones, hardly to be got along without in any household, however humble.

To ascertain what was imported from the United States directly and credited to the same, I have to rely, petroleum excepted, entirely on the trade statistics of the ports of this colony published by the colonial government with the Blue Book for each year. Formerly a part (so set apart) in the Blue Book itself was devoted to the trade statistics of all the ports of the colony, but this was changed for 1884 and 1885, *i. e.*, the Blue Book was published first, and, strange to say, the "trade statistics," the most valuable part of it, nearly two months later. This really annoyed me, because I could not write my report before I had the statistics. In 1885, at the time the Blue Book and statistics for 1884 were published, I was absent on leave, and this year I did not receive the Blue Book for 1885 before August 25, and the trade statistics I could not obtain until fully six weeks later. Such a delay I never experienced in previous years, and it prevented me from preparing and forwarding my commercial report (*i. e.*, this) at a much earlier date, notwithstanding I had requested the colonial secretary many weeks ago to send me the trade statistics of the colony to enable me to have my report in Washington about the time Congress should meet, or soon after; pointing out that I could not obtain statistics from the chamber of commerce. I point the cause of this delay out to the Department, because I think it is right I should do so. I may, however, mention at the same time that the trade statistics as an appendix to the Blue Book were not presented to the colonial legislature much

sooner than to me and my consular colleagues; so that it cannot be said that a line was drawn between them and this consulate.

Without being a merchant or a member of the chamber of commerce, I cannot obtain the daily abstracts of exports, imports, and navigation prepared by the secretary thereof and issued to the members. But if I could, there would, in point of correctness and reliability, nothing be gained by them over the annual statistics gratuitously furnished me by the colonial government, since the chamber of commerce prepares its statistics from printed sheets or abstracts daily furnished from the bureaus of exports and imports of the port; and the latter receive the statements of exports and imports from the merchants, European and native, themselves as soon as effected (supposed so, at least); and it is pretty well understood here among men of business that these statements in point of distinction, whence obtained, valuations, &c., are not always reliable; so that, after all, the mercantile community is no better off than the government itself and the consuls. The trade statistics once received I cannot prepare my report, statistics, comparative tables, &c., including writing it and copying it by hand at once, to the exclusion of all other consular duties of a fixed nature, and as they crop up from day to day. There are ships' duties of variegated character which absorb much of one's time; the relief of seamen, keeping the records and accounts, correspondence, the verification of triplicate consular invoices of exports to the United States, and of landing certificates, preparing returns, and accounts, &c., *ad infinitum*, so that it is only in pauses, by piecemeals, that I can prepare the report. And in such an exceedingly important, trade center and transshipment emporium as Singapore is, there is naturally much of great interest to mention in a commercial report for a year if the consul wants to be conscientious in the discharge of his duties.

In the preparation of such a report one should be as little disturbed as possible, should be able to set apart at least three hours, with no interruption, per diem until it is finished. This is an utter impossibility here, because I have no deputy consul, and no allowance for one, and only an allowance that enables me to have a copying clerk. The consequence is, it takes much time to prepare and complete such a report, and it is utterly impossible for me to say, when taking the work in hand, in how much time I can finish and forward it. I can only say, and this most conscientiously, that I do the best I can to make it that which I think it should be and to forward it as soon as possible. In asserting this I must repeat and point out that the commerce of the United States, though it cannot be gathered from the unreliable trade statistics of the port, is surely (no sensible informed merchant here in good standing will deny it) next in importance to that of Great Britain in this port. And, in the face of that fact, and the meager assistance at my command, I must request indulgence if my report arrives late and fails in any respect short of expectations. There is much to be said in regard to what I have pointed out, but as I made all explanations I thought necessary in my dispatch of November 5, 1884, I will not repeat them here.

I just said (and in nearly all of my annual reports) that the trade statistics of the port were not reliable. As far as figures or calculations of imports and exports as to articles are concerned, they may be approximately correct, but the places where from imported and whereto exported are not correctly stated, far from it. The fact is, this being a strictly free port—free from duties of export or import—that in the bureaus of export and import (under the harbor master), where the

trade statistics of the port are compiled, they credit the port or country from which as per bill of lading or manifest the goods were shipped to this colony. Thus, if, for instance, a party in New York ships a consignment of goods to a firm via Liverpool or London, the goods being transshipped there, Great Britain is credited under imports where from, and not the United States. The same is true of goods imported from San Francisco. There is no direct steamship communication between that and this port; steamers go no farther than Hong-Kong, and that part of their cargo which is destined for this port is transshipped there, and thus Hong-Kong, and not San Francisco, is shown to be the port whence imported. The trade statistics are thus very misleading to any one seeking reliable information or commercial instruction as to how much any country, not only our own, contributes to the commerce of Singapore and Penang in imports and exports. I feel morally certain that the imports shown in the said statistics as from the United States are in reality about one-half of the amount total.

To show at a glance the imports from the United States at Singapore and Penang for the years 1884 and 1885, I have extracted them from the trade statistics and condensed them into a statistical table, which I inclose herewith, marked A. This speaks for itself. It will be seen that the chief article of America, imports has been (and still is) petroleum. For 1884 it shows for Singapore the handsome sum of $629,936, and for 1885 (a little less), $589,926; for Penang in 1884, $193,559; 1885, $314,553; total in two years, $1,727,974.

For Singapore the aggregate of all imports in 1884 is shown to be $645,863, and for 1885, $1,129,135; for Penang in 1884, $196,709; for 1885, $322,470; total for both ports in 1884 and 1885, $2,294,177.

It will be seen in Table A, for Singapore, that, as per port statistics, silver coins to the amount of $516,000 were imported from the Pacific coast. This can hardly be regarded as merchandise, though, no doubt, in one sense it was. I strongly suspect that these coins consisted essentially of American trade dollars, which pass in this colony as legal tender, if they do not at home. They became such about ten years ago, when they strongly circulated in this colony and several neighboring countries, as well as in China. They gradually went out of circulation from about 1881 to 1885, when all at once they circulated again numerously among other dollars current here until about three months ago, when they again, as if by magic, disappeared. Deducting this import of silver coins of $516,000, from the sum total for imports of 1884 and 1885, viz, $2,294,177, it leaves a net for merchandise strictly for the ports of Singapore and Penang of $1,778,177; and, again, deducting the sum total of petroleum imported at both ports, viz, $1,727,974, it leaves for all other imports for the same period only $50,203.

This upon first sight appears to be a small amount for two years' imports of American goods. It should be so regarded if this were the actual true amount. At the same time, I may say, that as we have no American merchants here it need not be expected that in the main British and German merchants would neglect the commercial interests of their own countries for the benefit of other countries. The fact is, that the great majority of them will really only import those things from other countries which are not products of their own country, yet indispensable to the people and shipping here, or are in point of quality and price superior or cheaper, or have a certain usefulness or improvement over their own without being dearer or much dearer than their own. I will illustrate this by taking the articles of American imports shown on Table A seriatim.

There is an item of apparel, $450. This, I think, must have been a sample sending, or else the private effects of some person or party traveling, and entered under the name of apparel on the ship's manifest, and sent here to await the arrival of the owner, and stated to be worth (in case of loss or damage *en route*) the said amount. I reason thus, because I fear that our country in the main cannot compete successfully with Europe in articles of apparel, some specialties perhaps excepted; and, besides, the demand for ready-made apparel is very limited here in view of the comparatively small European or Christian population. Nearly all, if not all, Europeans and Eurasians have their apparel made to order mostly by Chinese tailors, and the natives prepare their own apparel, such as they are used to as a race, without the need of much skill, latest fashion plates or journals, &c., and some of them require very little of it in this extreme tropical climate.

ARMS AND AMMUNITION.

Some of our magazine and other rifles found favor here among planters, sportsmen, and people dwelling in or near the jungle, and were imported, with the ammunition fitting them, in suitable quantities. I think that in this instance the trade statistics give the actual invoice value of said goods, and statement as directly imported, because a good deal of vigilance is exercised in imports of arms and ammunition of any kind and from anywhere, and exports of the same to all Netherlands India and other states not remote from here are interdicted as contraband of war by order of the Government. The importation of American arms, chiefly magazine rifles, I may say, commenced only about seven years ago. They found much favor, and the demand for them steadily increased, though not in large quantities, as the statistics indicate. But for political reasons, the sale thereof would be ever so much larger.

CLOCKS AND WATCHES.

As to clocks and watches, I think the statistics give approximately the true value of their importation. As the value of either is not stated respectively, I think I am safe in saying that it was in the main intended for clocks, though I heard over a year ago of some very cheap American watches being in the market. In former years American clocks had scarcely any competition from Europe, not only here, but in the East generally. But this is the case no longer, as both England and Germany are in the market now, though not to a very dangerous extent as yet. But for the reasons above stated, *i. e.*, bad times and "low silver," there is no great demand for such goods at present. What is wanted here essentially, as the natives must be chiefly looked to as consumers, is a cheap clock of pleasing shape and appearance (in this I think our manufacturers beat the world), which is a safe, reliable timekeeper at the same time.

COTTON GOODS.

In this important item I think the trade statistics are not correct, viz, that much more was imported in 1884 and 1885 than is admitted, notwithstanding that I have been informed by merchants here, deemed reliable, that the factories in England were doing their best to cut us out by fair imitations and corresponding prices. I allude chiefly to unbleached goods, drills, and sheeting. I know of firms that receive constant supplies of these goods and sell considerable quantities of them,

But these goods are all shipped via England, and the United Kingdom appears under the caption "whence imported." The statistics show that at Singapore, in 1884, only $1,000, and in 1885 none, were imported; and at Penang, in 1884, $3,000 worth, and the same in 1885, were imported. This, I have reason to believe, is incorrect; that the importations, though not ponderous, were much larger, and that the demand from certain few firms will be constant. What the actual importations were I am unable to ascertain at present, because a certain amount of secrecy prevails in the premises. But I am satisfied to know that these importations continue.

In the Singapore statistics for 1885, $330 are shown for printed cotton goods. In this respect, I think, the statistics are correct and that this was a trial consignment. In a former full report to the Department on textile fabrics, I pointed out, with regard to this market, in which respects Europe has an advantage over the United States and what would be necessary to introduce bleached and cotton printed goods successfully in this part of the world. American unbleached drills and sheeting are still the best for the prices charged in the markets of the world.

As regards cotton goods, Upper India herself, with spinners at Calcutta, Bombay, and other points, commenced several years ago (with steady increase) to manufacture cotton goods (among them some very fine muslins) suitable to the demands of the local population, and is now turning out large quantities. Cotton is largely cultivated in Hither and Upper India. The most of it, I have been told, is short staple, but very strong, and I don't think they are turning out anywhere as good a cotton as our better grades of American cotton. But, in view of the immense area of British India, with a variety of soils and even climates and rainfalls, there is no telling what they may be able to do in future—in the course of time. At present they can successfully dispose of all the yarn and cloth they manufacture; the increasing number of factories proves this, and of course it goes at the same ratio against importations of certain cotton goods from England and continental Europe and perhaps our own country. Upper with Hither India, I may remark, though not within my district, is getting to be a manufacturing country not only of cotton, but of many other kinds of goods; and there is no reason why, with increasing education and civilization, the millions of cheap laborers, and the great and varied resources, among which, not only unexcelled wool, hair, and silk, but a great abundance of various kinds and most valuable fibers, &c., she should not become a manufacturing country, and thus be enabled to keep much of her capital at home and become more prosperous and great. The number of manufactories is steadily increasing, and some of them are turning out machinery, tools, and implements. India, under a careful, wise, and liberal administration, has a great future before her.

DRUGS AND MEDICINES.

In this the statistics are, I believe, nearly correct, though some, I have been told, come here out of bond from England and may have been credited to the United Kingdom under "where from." There are a few American patent medicines firmly established here and in constant demand (have been for years), because efficacious, easily understood, not dangerous, and well known to the public, natives and all. But it is very difficult to introduce new patent medicines and drugs, not only owing to the unusually lively competition from Europe, but because a certain

(rather large) proportion of the native population make, so to say, no use of them at all. That portion has its own doctors (?), herbs, oils, salves, roots, extracts, abominations, superstitions, witchcraft, &c., and dies happy in its belief.

Some of them do believe (cannot help to) that "the white man doctor" has a greater knowledge, especially in surgery, than their own; but "caste and religion" stand between him and their own "medicine man," with or without a priest. I have known of cases where dangerously or mortally injured natives (through accidents or murderous assaults), conveyed to the public Colonial Hospital by the police, were taken away by their relations, generally Islamites, as soon as they ascertained their whereabouts, to their own dwelling places (there to surely die, as a rule). But in cases of contagious or infectious diseases the government commands and takes the patient forcibly, if necessary, to the Colonial Hospital upon discovering the breaking out of such diseases, while in other diseases the natives are at liberty to pursue their own course as to medical or surgical treatment.

FRUITS, PRESERVED.

Of this kind of imports the Singapore statistics for 1884 report $3,701 worth from our country, but none for 1885; and for Penang *none* for either 1884 or 1885. This is all wrong, because the consumption of preserved fruits (chiefly peaches, apricots, plums (stone fruits), pears, apples, grapes, &c.) with American labels, in most cases, is very large, and almost any observer would know or could guess that $3,701 worth for two years in the entire colony, with the protected Malay states adjacent thereto and receiving all supplies from Singapore and Penang, is only a small proportion of the actual consumption. Both our Atlantic and Pacific coasts export preserved fruits. The former come via England, and the latter via Hong-Kong. Now, on consulting the trade statistics for importations of preserved fruits at Singapore and Penang during 1884 and 1885, I find, taking only important points, as follows:

Where and whence.	1884.	1885.
At Singapore:		
From China	$22,733	$14,378
From Hong-Kong	31,348	26,606
From Italy	325	.....
From France	2,138	2,724
From Germany	2,000	.....
From the United Kingdom	7,385	2,718
At Penang:		
From China	6,312	7,502
From Hong-Kong	28,194	41,151
From the United Kingdom	.....	1,197

Now, leaving out Italy, France, and Germany, about which the statistics probably report correctly, I will first turn to China and Hong-Kong. As regards China, I am aware that she exports certain preserved indigenous fruits, and that the population here consumes part of them, probably a goodly portion of the amounts shown for China in the foregoing, but my opinion is that a part thereof includes American fruits sent here from Shanghai; and as to Hong-Kong, I feel pretty certain that the largest portion of the amounts shown as from that port are California fruits. As to the United Kingdom, I believe that very nearly all, if not the entire amount, consisted of fruits from the United States transshipped, if not transpacked there. From the foregoing it will be

seen that more preserved fruits from Hong-Kong were imported at Penang than at Singapore, though the former is a much smaller place than the latter. I attribute this difference in favor of Penang to two reasons chiefly, viz: (1) The sale of fresh fruits locally grown and imported from Siam and China (as oranges, mangoes, &c., from Siam, and oranges and persimmons from China) is much larger and variegated here than at Penang; and (2) Penang, far more than Singapore, is the agent and factor of and purveyor to the planters, officials, and traders in Province Wellesley close by, and, adjoining the latter on the south side, the protected Malayan provinces of Larut and Perak with their very large mining population added, all on the peninsula of Malacca, and the numerous tobacco planters at Deli, Sumatra, with their assistants (the best customers of all); and last, but not least, Penang largely supplies the Dutch garrisons, war vessels, officials, and traders in Acheen, Sumatra, with nearly all the food they consume (beef, but only a part of all consumed there, as the Coromandel coast of Hither India (*i. e.*, the ports of Madras and Negapatam) supplies by direct steamers to Olehleb, Acheen, a prominent portion of it and all of it on the hoof, also from Penang). What holds good of preserved (*i. e.*, canned or bottled) fruits holds also good of other kinds of canned goods, as vegetables, soups, meats, salmon, &c., with regard to supplies for Acheen from Penang (and Singapore for that matter, though less).

CARRIAGES.

In the statistics of 1885 for Penang, an importation of $470 for carriages is mentioned. I am aware that a few American carriages were also imported here in 1884 and 1885 and that they do not appear in the Singapore statistics. I do further know that these vehicles, one and two seated buggies and two-wheeled dog-carts, though neat and handsome, took a long time to sell, and then at reduced prices. I devoted, four or five years ago, large space in one of my commercial reports (it was published) to carriages, reporting upon local customs and habits as to driving, climate, the carriages themselves, &c. I showed how the latter should be provided, what additions and appendages they should have. But I find that since then not one of the vehicles sent from our own country was provided as recommended by me, and that had much to do with their slow and reduced sale. I repeat now:

(1) That, dog-carts covered or open excepted, each four-wheeled vehicle should be provided with a driver's seat. If a phaeton or buggy phaeton, in such a way that it can be taken off or put on easily (to be solid when set up), to give the owner the liberty of driving himself from the main seat, or to be driven by his groom.

(2) The top, when up, should come well forward, so as to nearly touch the back of the coachman. It is to give ample protection against a slanting tropical sun, morning or afternoon, as well as against a driving, beating rain squall (the latter are frequent here and always accompanied by high winds); the apron, of good oil-cloth, under the dash-flap, should be broad and long, so as to reach up nearly to the neck of an average adult person, and to let in no rain sideways below the body of a person; rings, to which to fasten by hook (hang), should be fastened neck high inside on either side of the top (to a bow), the respective hooks to be well sewn correspondingly on the apron.

(3) Behind the vehicle, a foot-board should be solidly fastened to the back axle, or by way of suspension from the spring-bar, for the groom or coachman, when his master drives, to stand on; and there should be

two straps solidly fastened to the hindmost bow of the top, so he can hold on to the same (strong enough to give him sure footing). The foot-board should not be over 18 inches or thereabouts above ground, so as to enable jumping on or off with ease.

(4) A vehicle should be so constructed that it can be turned in the smallest possible space (around its own axis, nearly) without the fore wheels touching the body of the carriage. I know of some very handsome buggies, about which I also reported, that sold badly because they were not constructed in that way; the fore wheels, being large, required describing a large circle in turning to prevent the tipping over of the buggy; also, because they had no foot-board behind.

(5) The very best species of thoroughly seasoned wood should be used, especially for the wheels, and the latter, hoops included, should be a little heavier, more solid looking than of those sent out. There is a great deal of notoriously reckless and careless driving here, carriage accidents are of frequent occurrence, and a vehicle with light, fancy wheels, taking a common chance, is apt to soon come to grief. I am aware that American buggies, though admired for their neat, handsome, and graceful appearance, were viewed with distrust on account of light, spider-like wheels. Why not give a little heavier, stronger wheels if they want them? they wouldn't cost any, or very little, more.

(6) Dog-carts with strong, high wheels, and provided with top and dash-board (the same as a buggy), and a foot board behind, are much in demand here for both horses and ponies. Open dog-carts are also much in demand. There are various patterns of them, but doubled-seat ones, for four persons, to sit back to back, are most in demand.

This shown, I would mention that there are plenty of carriage factories here and that they are on the increase. A very few of them are conducted by Europeans and the rest by Chinamen. The former, one factory in particular, turn out very good and neat work of the most modern and stylish kind and of most any pattern or design, and charge pretty high prices, and get them, too. They have constantly a stock of ready-made carriages on hand and build to order as well. They guarantee their work, common wear and tear, for one year (all factories do that here), and act up to agreement. Many of the "carriage findings," or trimmings, are imported from our country, and do not appear in the statistics. The local carriage builders have a great advantage in having the very best kinds of wood for their carriages. I don't think that any part of the world produces better woods for that purpose (for any kind of vehicles), and all mechanical purposes, and in greater variety than this part, viz, Indo-Malaysia, mainland and islands, with Siam and Burmah, or for less money, though the best species have been gradually increasing in value. This I have mentioned in several reports.

All materials and findings for carriage building are duty free, and so are ready-made carriages; in fact, all kinds of goods. Europe, especially Great Britain, is a competitor in the carriage trade, and there they have learned the points most desired in vehicles for this market and build accordingly, and succeed in selling their work for about the same prices as locally built work sells for. But, taken all in all, the locally built vehicles find the most favor, because of excellent material and guaranteed for one year.

IRONWARE AND MACHINERY.

The Singapore statistics show imports of ironware in 1884 for $90, and in 1885 for $370, and of machinery in 1885 for $471. This machinery, I think, consisted of stump-pullers, as I had been consulted about this

useful article of American ingenuity and invention. As to machinery, I am willing to consider the statistics correct; but I think otherwise of ironware, or hardware, as we call it, because this branch of commerce embraces such a vast multitude of articles, among which there are some, especially in the line of mechanical tools and agricultural implements, which are nowhere made better, more useful, and ingenious and labor-saving than in our country. Now, while fully aware that we have dangerous competitors in this branch of commerce in the United Kingdom and parts of continental Europe, I feel morally certain that more has been imported from America than the statistics show, only the goods came via England. I think there are parties here who import some American hardware, but keep it to themselves, and ignorant purchasers believe them to be European, or raise no questions about the country where they were manufactured; the article suits them and that is all they care for, the purchasers being in the main Asiatics. This secret keeping of the country of manufacture does not matter much so long as an article is in demand and is not underbid through counterfeited goods. A number of our American tools, implements of husbandry, &c., all of them—shape, make, finish, and material—the result of American ingenuity, energy, perseverance, and sacrifices, have been counterfeited with more or less success in Europe, though I fail to find so far that they make use of American trade-marks.

I have during my long residence here made repeated and strenuous efforts for those tools and implements (especially axes, hatchets, plantation, grubbing, and garden hoes, &c.) as seemed to me would, owing to their great superiority be sure to find among European planters, and even natives, ready customers and increased demand. Some trial consignments were sent out and sold, but somehow other shipments did not follow. Upon inquiry I found that close imitations of the same goods, cheaper than the American originals, were imported by British and German firms.

Germany is now a dangerous competitor in iron ware in British colonies; the statistics make this plain from year to year. One can call here in most any ironmonger's shop for and be shown an American ax, but upon close inquiry he finds it was not made in the United States. One species, and so marked, goes under the name of "Anglo-American ax." The relationship is strong in appearance, but in quality I should want to count it out. I bought one myself to try it, and on a hard, knotty stick it proved brittle, breaking off by bits. Still, for all that competition, I have it from good authority that on the tobacco estates in Sumatra a great many American axes are in use, give great satisfaction, being preferred to any other, even if a little dearer. The planters must receive them by way of this colony, yet the statistics don't show it; and it really makes no difference, because Sumatra, where they are bought, is Dutch territory.

On looking over the stocks of goods in most of the ironmonger's shops a practical American finds such an absence of useful implements and tools and things such as we find in our carpenter's and cabinet-maker's shops, or on a well-ordered Western farm, or of improved make or patents, and in lieu thereof a lot of superannuated wares, some of them clumsy and of coarse workmanship, and in material to all appearances inferior. I have never yet been able to find an American bucksaw or even an approximate imitation of one, nor an American grubbing hoe or corn or garden hoe (the hoes made by Chinese blacksmiths are in use here and can be had for about 20 cents). If the United Kingdom is a competitor with us in such wares, it fares no better than we

do in its own colonies. I have tried my best to impress some merchants with the success they would have if they imported them (in this wooden planting and mining country), describing the shape and usefulness of them, but all in vain. They are all city-bred Europeans (and the Chinese are used to Chinese articles and very conservative) and have no correct idea of tools and implements that would prove so useful and beneficial, and explanations are simply useless; they know more about piece goods and textile fabrics in general demand and use.

I look upon this (all of Indo-Malaysia, including the Archipelago, Siam, and Burmah, &c.,) as a splendid field for the sale of American tools, implements, articles of husbandry, &c. (not so much for labor-saving machinery); but I feel thoroughly convinced that so long as no Americans, practical smart men that understand the use of these things and can explain them, open firms at prominent points for the sale of them, this market is practically closed and lost to us to a very great extent. Such smart Americans might introduce and sell many other kinds of American goods as well, become of great benefit and usefulness to our manufacturers and laborers at home, and make fortunes for themselves. I have said so years ago and can only repeat it.

PETROLEUM.

In that we flourish in the statistics and in reality, because the article comes here direct from our Atlantic coast, not transshipped in Europe. Russian competition, too, has not interfered in the least with our petroleum trade in this colony so far, and I don't think it will very soon, if at all. Our petroleum comes in nice, presentable, handy shape, in well-made, fine cases, containing two tin cans of five gallons each, and it is really and truly refined petroleum—a good article. And this it has to be to receive a permit for landing from the colonial authorities, as it has, under a colonial ordinance, a certain prescribed test applied to it by a sworn inspector, proving itself not to be dangerous oil. Every cargo, immediately after arrival in port, has to undergo this test, and if it does not come up to it the cargo is condemned, and the vessel carrying it is forbiden, under a heavy penalty, to discharge it within the colony; though there is a bill, as an amendment or modification to the petroleum ordinance now before the colonial legislature, which provides that a cargo of condemned petroleum ("dangerous oil," so called) may be landed in an isolated place, out of danger to the community, on the express condition, under a heavy penalty, that none of it is to be sold within the limits of the colony. This will relieve the local consignees of such a cargo (supposed to have been made the victims of American petroleum exporters) and the master of the vessel carrying it from much annoyance, loss of time, and expense. It is tacitly assumed that neither the local consignees nor the master of a vessel are to blame if a cargo of oil does not stand the prescribed test (and it is not a very high exacting test), but that the exporter or petroleum tester in the United States only is responsible.

Since the said petroleum ordinance came into force June 1, 1885, of the many vessels that brought petroleum to Singapore and Penang from New York and Philadelphia, only one cargo, this at Penang, did not quite come up to the prescribed test and was forbidden a landing. In this case the test applied to quite a number of cases taken at random irom the cargo gave an average that fell short of the 71° Abel's flashing test. This caused the consignees and master of the vessel much annoyance, delay, and expenses; the matter was taken before the

chambers of commerce of both ports and led to a petition to the colonial government to modify the existing petroleum ordinance to the extent above explained. The modification will no doubt pass the colonial legislature.

Immense quantities of American petroleum have been landed at this port (less at Penang) in the last few years, not only for local consumption, which is, I may assert, now general among all classes of the population regardless of wealth, but also for transshipment to ever so many ports and places in Southern Asia, of which Singapore is practically the distributing center and in constant communication by steamers and native sailing crafts. The whole east coast of Sumatra is supplied from Singapore and Penang, which means much, as it includes the well-populated and wealthy tobacco districts of Deli, Langkat, and Serdang. (A railway now runs in Deli, from Labuan, on the sea coast, west to Medang, near the heart of the island, and the country or belt through which it runs may practically be called one immense tobacco plantation.) Also, the west and east coast of the peninsula of Malacca. The west coast, as far as Maulmain, in British Burmah, embraces the provinces of Johore with Muar, the settlement and town of Malacca, the protected native Malayan provinces of Sungi-Ujong, Salangore, Birnam, Perak with Larut, the settlement of Province Wellesley (all teeming with enterprises of tin mining and planting), and, north thereof, the coast of Tenasserim, Pegu, and a part of Burmah. The whole east coast of the peninsula as far as Siam proper is supplied from Singapore, embracing, north of Johore, the independent Malay province of Pahang, and next Tringany, Kalantan, Patani, and Singora, Malay provinces under Siamese suzerainty. Siam proper, by way of Bangkok, receives on rare occasions cargoes of petroleum direct from the United States, but by far the largest portion comes from Singapore (transshipped) and that amounts to a great deal. Saigon, in French Cochin China, is also supplied from this port; but may also receive supplies from Hong-Kong. The countries and ports of south, west, and north Borneo, as Pontianak, Sarawak, Labuan, Brunai, and the territory of the British North Borneo Company, with several ports, of which Kudat and Saudakan are the most important, are also supplied from Singapore, as well as the Sooloo Archipelago, just north and east of Borneo. Added to all the ports and countries mentioned, come the hundreds of minor stations and islands, scattered about like a handful of peas over a large sheet of paper, which are supplied by small steamers and Malay prahees and junks, some of these places being trading places and stations of some importance. Last, but not least, I would mention that part of the Dutch Malayan Archipelago (all lying west and south and southeast of Malacca Straits) is supplied from Singapore and part from the Javanese ports of Batavia, Samarang, and Sourabaya, and Macassar on Celebes, as far southeast as the Moluccas and New Guinea (and of course many other kinds of goods go with petroleum and the same vessels bring back the products of each respective landing place).

To go into the details of the immense field of consumption of American petroleum, above briefly indicated, I would have to write many pages, and I think this is sufficient to show the very important part petroleum plays in the commerce of this part of the globe, all the more as it is a now indispensable article, regardless of state of gold and silver.

From October 1, 1884, to September 30, 1885, were imported at Singapore, as per landing certificates sworn to in this consulate from the United States direct, in 15 vessels, of which two discharged part of their cargo at Penang, 349,419 cases of petroleum, containing each two five gallon tin cans, or 698,838 tins, or 10 gallons per case; total 3,494,190

gallons. The average value per case, I think it is safe to say, was $2, or for all, $698,838, local currency. Of the vessels that brought this oil to this port 7 were American, 6 Italian, 1 British, and 1 Austrian.

From October 1, 1885, to September 30, 1886, were imported here, as per landing certificates sworn to, from the United States in 23 vessels, of which 7 were American, 11 Italian, 3 British, and 3 Norwegian, 603,729 cases of petroleum, containing 1,207,458 five-gallon tin cans, or a total of 6,037,290 gallons. Owing to increased importations, with a large stock in the market, the price of the article fell somewhat, but I think that $1.85 at least per case was the average price per year, which would give a total of $1,116,898.

The question has been agitated for some time in and out of the local papers, especially of late, when importations vastly increased over former years, whether all supplies of petroleum required here would always be imported from the United States, if the oil springs there should continue to hold out. It was pointed out that countries ever so much nearer than America or Russia, as for instance, Burmah, Sumatra, Java, and prominently Borneo (the territory near Brunai or Labuan), were rich in petroleum, and were known to be for a long time back, and it was urged that with the needed capital (to be had), the oil industry might be developed and refineries established in said countries, and that thus "much money would be kept at home." It was further pointed out, that in view of the heavy outlay in the United States in bringing the oil from the springs to the seaboard, hundreds of miles, and from there to this port, this would be gained or saved to a great extent; that all considered, it was time, and it would pay, to develop said oil fields, and to get them into good working and shipping order. Much was said, but "not all that was necessary."

Now, if they had Americans here, both capitalists and workers, in any branch of work connected with petroleum, from the well to the seaboard, or persons who could prove their equal, I might say that our country might have some reason to fear such a substitution (as such it is intended more than competition). But, while it is to be admitted that the necessary capital could be produced if it was found that it would pay beyond doubt, there is none, as far as I am aware, taking hold of the business; there is no skilled working force, and beyond venting the matter in print and in social circles, there appears to be absolutely no animation, public or otherwise, towards calling such an enterprise into life.

Burmah has been known to be rich in earth oil for ages back, and earth oil, raw and unrefined, was exported in large jars or jugs thence to the ports of India long before petroleum was exported from America, and was used more for medical than other purposes by the natives. A few years ago some parties in Burmah started the business of refining petroleum on a small scale, but from all I could gather the enterprise has not proved growing, and their refined product must have been consumed at home, since I failed to learn that it interfered with American petroleum in the least. But now that the British have annexed all Burmah, it remains to be seen whether efforts will be made to make the petroleum industry a success. That country is reported to be rich in petroleum.

Not far from Deli, Sumatra, in a somewhat isolated, out-of-the-way place, good oil springs were discovered, and one or more Hollanders took steps to develop the industry and tried to form a syndicate or stock company at Batavia. But it appears they did not succeed, and a few months ago Achinese raiders visited the locality, attacked the parties living and working there, and destroyed what buildings and work

towards that industry had been erected or made. No resumption of the work, I have been told, has taken place. Of anything that has been done in a like or similar direction in Java, I have not been able to gain any information worth writing about; only that petroleum springs had been discovered there.

From authority I deem reliable, I have learned that a district on the west coast of Borneo, near Brunai, is rich in oil springs; that the existence of earth oil has been well known to the natives for many years (that district is, also, rich in bituminous coal of very fair quality). Lately a party here, appearing to be well informed in the premises, endeavored to make propaganda for the development of the oil industry there, through the local press, mentioning among other things that the American petroleum trade failed to bring about a lively reciprocal trade with the United States, since the products of this part of the world, *i. e.*, Straits produce, found their way to the United States from London, instead of from Singapore; that the trade was only of some benefit to the few vessels left of the once great American merchant marine. He was not answered through the press; the matter simply became the subject of considerable discussion for a few days and then was laid aside; agitation, it produced none. It was an injustice to say that our petroleum trade proved profitable, *par excellence*, to the few vessels of our merchant marine, because any records prove that more than one-half of the petroleum imported here from the United States was carried by foreign, essentially Italian, vessels, which, I have repeatedly heard, accept lower freight rates than vessels of other nationalities and receive a subsidy or bounty from their Government. If any danger threatens our American petroleum trade from the quarters mentioned, it will, I feel confident, be a long time before it is realized.

PROVISIONS AND SALTED MEATS.

As to provisions (canned) and salted meats, I feel certain that much more was imported at Singapore and Penang during 1884 and 1885 from our country than the trade statistics show. The sum total for both years and ports of all that comes under that head is shown to be only $5,350. The trade statistics show, under the caption of "Provisions, fresh and salted" (we know that in this climate, except on ice, which is dear, in steamers, though not near as on the scale carried in Atlantic steamers, no fresh provisions can be carried for a great distance, at most three or four days, and that, therefore, what I allude to, may be pretty safely considered as salted provisions), that, for instance, mentioning only important ports, there were imported in 1884 and 1885 the following:

From—	Singapore.		Penang.	
	1884.	1885.	1884.	1885.
Australia	$3,505	$4,182	$60	.....
Austria	3,837	4,145	.....	.....
Belgium	6,343	17,872	2,860	$500
British (Upper) India	11,294	.....	1,861	.....
China	358,222	415,059	43,640	48,840
Hong-Kong	462,130	532,679	144,719	169,367
France	6,543	12,262	8,134	1,200
Germany	12,742	19,847	31,769	9,118
Holland	5,389	3,065	15,871	11,536
Italy	14,374	8,841	1,5?9	3,918
United Kingdom	195,616	351,874	120,592	81,253
Salted beef and pork from all countries	21,023	27,872	.....	90
Total	1,101,018	1,397,198	371,035	325,912

For salted pork the statistics for both years and ports show importations amounting in all to only a few hundred dollars. Now, granted that vessels, steam and sail, from transoceanic ports generally bring salt pork enough with them to last them for the round voyage, there are plenty of vessels that do not, and for this reason I look upon the statistics concerning both salt beef and pork as erroneous; but it may be that many such importations were entered under other captions. The question is how many articles not mentioned by name in the statistics are entered in the statistical bureau under the head of "salted provisions." Now, for instance, "butter and cheese" are not taken up under the provisions caption, but are assigned together a place in the statistics, so that one cannot find how much butter and how much cheese was imported, nor do the United States appear under this caption, though I know that American tinned butter was imported, if not cheese. It is shown that at Singapore in 1884, $69,980 worth of butter and cheese were imported (none at Penang), and in 1885, $57,407 worth at Singapore and $14,806 worth at Penang, and all from different European countries, the United Kingdom alone standing credited with a total for both years in both ports of $84,902; though, whatever may be true of cheese, I don't think that of all this amount of butter was produced in the United Kingdom. One must know how to read between the lines in these statistics.

The question then is, which articles fall under the head of "salted provisions," and the answer is that it embraces a long list of articles. The statistics show that by far the largest amounts were imported from China and Hong-Kong, and this embraces for Chinese consumption various salt-pickled vegetables (prominently cabbage and a kind of carrots), small fishes, and shell-fishes, and even certain fruits; but I think it embraces, also, canned (or put up in bottles and jars) provisions shipped from transoceanic ports. What the proportions of actual Chinese and not Chinese items are it is impossible for me to say. To ascertain this (and, in fact, for all goods imported) I would need an extra allowance for a very able extra clerk, to be allowed a desk in the statistical bureau of the port, with full permission to obtain all needed information, and I do firmly believe that such an appropriation would pay, prove valuable to American trade, because imports of importance could be reported home and published there at any time without waiting for unreliable annual statistics.

Leaving China and Hong-Kong out, I believe that salted provisions embrace hams, bacon, all kinds of canned vegetables, beef and other meats (potted meats), soups, canned milk, &c. As to canned vegetables, beef, milk, potted meats, much of what is imported is American, as the labels show, if the statistics don't; as above explained, the transshipment in England accounting for the seeming discrepancy. The best canned milk in the market is American milk, generally admitted, and at a higher price than any other imported finds large sales.

Well-informed business people can pretty well guess how much of the very large amount of salted provisions with which the United Kingdom stands credited was actually produced in that country.

TOBACCO.

The statistics show that in 1884 at Singapore $2,242 worth, and in 1885 at Penang $882 worth, and at Singapore $3,887 worth were imported from the United States. This trade is increasing and embraces plug tobacco, for the shipping more than local consumption, and the better

brands of (cut and dried) smoking tobacco, the latter being chiefly smoked by Europeans, seafaring and resident. The natives use now and then plug tobacco, but in the main they use tobacco of Asiatic growth, prepared in various ways by themselves to suit their own tastes and fancies. The statistics also show importations of tobacco for said two years and both ports from France, Germany, Holland, and Italy, for several thousand dollars. I think that the tobacco from said countries is smoking tobacco, and that American tobacco will gradually, to some extent, take the place of importations from said countries, and would have taken it long ago but for our revenue laws, which hindered the export of American tobacco in stamp packages. The imports of tobacco from Hong-Kong for said two years at Singapore and Penang were very large, as follows:

Ports.	Quantity.	Value.
	*Piculs.**	
Singapore in 1884	26,900	$595,068
Penang in 1884	4,893	106,918
Singapore in 1885	20,844	471,345
Penang in 1885	5,279	133,052
Total	57,916	1,306,383

*1 picul = 133⅓ English pounds.

This tobacco from Hong-Kong is essentially of Chinese growth, prepared in China for Chinese use in this colony and neighboring countries; it is very finely cut and of a dark brick-red color. But tobacco importations from Hong-Kong may also embrace consignments of American tobacco to a moderate extent.

The statistics show also tobacco importations from the United Kingdom as follows:

Ports.	Quantity.	Value.
	*Piculs.**	
Singapore in 1884	264	$16,913
Penang in 1884	69	7,332
Singapore in 1885	384	15,379
Penang in 1885	55	4,910
Total	772	44,534

*1 picul = 133⅓ English pounds.

I think that a portion of this tobacco was American plug tobacco out of bond in England, and for the rest we know how much of it was grown in the United Kingdom, if manufactured there. With tobacco imported in the East from Great Britain and continental Europe and manufactured there, it is a good deal as with cotton goods manufactured there, *i. e.*, the United States sell them the raw material, nearly all if not all, so that ou country was benefited by the production and export of the raw material

WHEAT FLOUR.

As to this very important article no importations from the United States (nor from the United Kingdom as a matter of exception, which is strange) are shown in the statistics, notwithstanding that the flour sold in the bazaars here in bags is California flour, as the inscriptions

or trade-marks on the same plainly indicate. Some of the large bread and biscuit bakeries import it in barrels and bags, and all of it comes from Hong-Kong, transshipped there from San Francisco. The consumption of wheat flour in this colony and adjoining provinces is very large, notwithstanding that rice is essentially the staff of life for the entire native population. Owing to the extreme tropical climate and excessive moisture in the atmosphere, Singapore and Penang can never serve as store-houses of wheat flour or "breadstuffs" for a protracted time, of over a few weeks at most, because the same would absorb atmospheric moisture, and mold or sour. Consequently the flour exporters here, who are all Chinese, have their agents or depots at Hong-Kong, and draw from there from time to time the needed supplies. The United States has, as the statistics show, two competitors in the flour trade, viz, Austria and Australia, the importations from the former being somewhat on the increase. To my knowledge a Chinese bakery (the largest of any) here has imported for many years wheat flour from Trieste, and there being a monthly service of direct steamers from that port, via Bombay, Colombo, and Penang, to this port and on to Hong-Kong (the Austrian Lloyds), our California flour exporters have more or less reason to be watchful of this competition. Upper India, which of late years has become noted as a heavy wheat exporter to Europe, has not as yet appeared as a flour competitor in this colony, but I fear it will be only a matter of time until she becomes such. If they have flouring mills that grind more wheat than they need for home consumption, they shall probably want to sell the surplus, if it can compete in quality with the flour now in use, in the colonies and countries nearest to them.

To give an idea of the quantity and value of wheat flour imported in this colony, I quote from the statistics of Singapore and Penang for 1884 and 1885, mentioning the most important importations only, viz:

Ports.	Whence imported.	1884.		1885.	
		Quantity.	Value.	Quantity.	Value.
		Piculs.		*Piculs.*	
Singapore	Austria	600	$9,000	2,749	$18,500
	Australia	54	600	807	5,900
	Hong-Kong	100,450	469,524	86,685	457,402
	China	102	423	34	196
Penang	British India			2,801	13,169
	China	504	2,688	12	28
	Hong-Kong	1,025	9,986	42,096	194,928
	Total	102,735	492,221	135,186	688,523

It is very strange, in point of simple consistency, that the trade statistics should utterly ignore our country as a flour exporter to this colony and substitute Hong-Kong. Just to think of the "immense wheat fields" on the barren rocks of Hong-Kong to produce, and the grist mills (not existing) there to turn out such an immense quantity of wheat flour! Comment is unnecessary; only this, these statistics go to the whole commercial civilized world, and such as are not informed will look upon Hong-Kong as a prominent wheat-producing country. And as it is with wheat flour so it is with quite a number of other articles in the said trade statistics, in and for which our country receives no mention at all. Nor is our country the only one in this respect; there are other countries that fare just as badly and even worse; and the business man, manufacturer, and merchant in our country or Europe who has not been

in this part of the world to study its commerce and consult these statistics, is accordingly misled or misinformed. On the other hand, the ports of this colony are free ports without custom-houses; and while port regulations for the correct report of imports and exports to the respective bureaus, in charge of the harbor-master of the port, exist under penalty, it is, without the enactment of new strict laws, almost impossible to get better, more detailed, and reliable statistics than those hitherto published.

EXPORTS FROM THIS COLONY.

Now what is true in the colonial trade statistics of imports, as above explained, is equally true of exports in point of destination; they show under the caption of "where to" the country for which a vessel cleared, or in which the port is situated for which it cleared, and for which bills of lading were signed, notwithstanding the goods mentioned thereon may be destined for another country, to be transshipped thither. But as regards the United States, I have the advantage in exports over imports in this, that I can furnish my own statistics, based upon the exports declared by the shippers in their invoices in this consulate and the consular agency at Penang, for each quarter, and both the quantity and value of each article by name and the aggregate for the year with the aggregate of the preceding year, so that one can see at a glance in which article (or in the aggregate for each quarter and year) there was an increase or decrease. As during my absence on leave last year no statistical report of exports for the year ending September 30, 1885, was sent to the Department, much to my regret, I send it now, both for Singapore and Penang, and would point out that I have so arranged my tabular report of the "quantities" of exports as to show what portion thereof American, British, and foreign vessels not British (the last mentioned under that heading), respectively, carried to the United States from this port. The freight tables speak for themselves and need no additional comment from me under the caption of "exports."

Under existing port rules exporters, when they ship goods to the United States (declared in this consulate) by steamer in an indirect way, that is to say, via an English port if for the Atlantic coast, and via Hong-Kong if for our Pacific coast, are in honor bound to report at once and correctly, truly such shipments to the colonial export office. I believe that the majority of the shippers adhere to this rule, but I am fully aware that in instances it was and is not adhered to.* The result is, making at the same time allowances for possible mistakes in the statistical bureau, that the trade statistics do not at all agree with my annual reports of exports to the United States. But, after that, and I deeply regret it is so, even my own export reports, regardless of every care and labor bestowed upon them, and of being the true summing up for each quarter of and the year, based upon the declared exports as per shippers' invoices on file and record, fail to show the actual quantities and values of exports of Straits produce† from the ports of Singapore and Penang to the United States. If any one looks upon my report as the actual exhibit of all Straits produce shipped to the United States during the year for which it is made, he is sadly mistaken, and it is for

* From the colonial bureau of exports such reported shipments are at once reported to the chamber of commerce for the information of the members thereof.

† Straits produce embraces all articles of export appearing in the Singapore (and Penang) market report and price-current, published weekly by the chamber of commerce.

me now to show and explain the grounds upon which I base this information, as follows:

Since the act of 1865 prescribing that an additional or discriminating duty of 10 per cent. ad valorem, in addition to any duty already thereon existing on very nearly all goods produced, grown, or manufactured in countries lying east of the Cape of Good Hope, should be levied when shipped to the United States from ports or places lying west of the Cape of Good Hope, was repealed by Congress a few years ago, a different state of affairs set in. The result of this since then has been and is that Europe, prominently London, has become the chief mart of Straits produce and products from the entire East, while Holland, *i. e.*, Amsterdam and Rotterdam, takes about the same place for certain products, at least from her colonies in the East known as "Netherlands India," and that large quantities of such products are shipped from said and other ports and declared before and verified by the United States consular officers stationed at the respective ports, notwithstanding (I, at least, have received no information to that effect) that the United States statute prescribing that "all invoices for exports to the United States shall be produced to and declared before the United States consular officers nearest to the place of growth, production, or manufacture of the invoiced goods," &c., has not been repealed.

Are nutmegs, pepper, and other spices, rattans, Malacca tin, coffee, Eastern gums, sago, tapioca, &c., the natural products of England? Everybody knows they are not. I shall have to return to this subject again under the caption of "navigation," to show how this is affected thereby, but now I want to show how American consumers, since these are products which go very nearly into every household and American trade generally, are affected thereby.

Granted that in point of time, or speculation, or both, it is very convenient and advantageous to firms in Atlantic seaports to order or buy per telegraph certain quantities of Eastern products to be delivered by early steamer or, that a merchant in London, lower quotations ruling there, and better ones prevailing in the United States, avails himself of the latter market by telegraph and hasty shipment. Eastern goods bought in Europe naturally must cost more than if bought in the country of production or growth. Allowing that the cost of freight from Singapore to London is about the same as if shipped by steam or sail from here direct to New York or Boston, there must be added the costs of discharging in London, all dock charges, warehouse rent, and insurance; then the costs of reshipment and a second insurance for the transit and the cost of freight of the same across the Atlantic. And the London merchant, after the original shipper in the East has made it, must somehow, and as a matter of course, make a profit or a goodly commission if he is to exist, and last, but not least, goods nearly always suffer more or less through transshipment. But, "Pshaw!" may some one say, "one can buy often enough an article cheaper in London than it sells for at the same time in Singapore." Granted this is so or be so, we must ask, "Is it in as good a condition as when it left Singapore?" and, next, it may be accepted that he that has them expects to make good any loss, if he is forced to sell, on some other article that rules higher than in the East—he is bound to recoup, or recover, and some one has to pay for it, and that "some one" is the consuming public, the victim of speculation.

I have often asked myself (could not help it), "How can a consular officer in Europe certify conscientiously to invoices of Eastern goods, a precious few articles excepted?" I place myself in his position and

argue about like this, viz: A merchant produces to me an invoice of black pepper about to be shipped to New York, invoiced at current London quotations. Now it occurs to me that in order to be right (notwithstanding the exporting shipper is prepared to make oath, and truly, too, that the invoiced price is the current local market quotation, and I may regard it in that light), in the spirit of existing statutes and other standing instructions that this pepper was not produced within or near my consular district, but in Malaysia, near Singapore, and the would-be local shipper admits that it was sent from there, I would say to him (have to), "Produce to me under oath your Singapore invoice with bill of lading for it (whole or part of original shipment) and an abstract, as well, of all the expenses you had on it since its arrival in Europe, adding, also, the charges of reshipment, commission (if he is purchasing agent and not owner), &c." If the summing up of all this should essentially agree in the aggregate with the invoice produced, I should certify to it, but not otherwise, and then only if permitted by statute; the local quotation would be absolutely nothing to me.

To these shipments of Eastern products from European, prominently English, ports, and the injurious effect they had on reciprocal commerce with the East and American navigation, I have repeatedly alluded in my commercial reports since the 10 per cent. discriminating duty act, above alluded to, was repealed, and in particular (urgently) in my dispatch No. 596, of December 6, 1884. At that time, and for some time after, exports to the United States sank to about one-half of any former year; I heard that the only and direct cause of this was that Straits produce had been and was being shipped in large quantities from England; that the merchants there experienced no difficulty whatever about having their invoices verified in the American consulates. I reported this to the Department, and not very long thereafter exports from here to the United States gradually and steadily increased until about four months ago, when they again commenced falling off alarmingly, with a steadily increasing population at home. Upon inquiry in various quarters, I learned that the large shipments of Straits produce from European, prominently British, ports were the direct cause of it and that it was viewed with dissatisfaction by such of the local merchants as have no branch firms in Europe. I can assure the Department that the promiscuous export of Eastern goods from European and British ports to our country, instead of from the East direct, is injurious, very, to American commercial interests generally, and to our reciprocal commerce with the East in particular. Nothing will tend to build up our national prestige and commercial welfare in the East like direct reciprocal commerce and statutes by Congress that will insure it. Without it, as I verily believe, after fifteen years' residence at this port, and in view that we possess no colonies (and want none), we are at an immense disadvantage.

As to the export of Eastern products to the United States from Europe there is certainly one product of importance, viz, Deli-Sumatra tobacco, which, through the force of existing circumstances, cannot well be invoiced in the country of its production for at least two essential reasons. Now, Deli, or, better said, Sumatra, belonging to Netherlands India, is not within my consular jurisdiction, and I might pass over it without alluding to it. The nearest port to Deli, in Netherlands India, with a United States consular officer is Padang, on the west coast of Sumatra, while Deli is on the east coast thereof, almost due east of Padang, and at the same time, nearly, if not (by latitude) due west of Penang (port and island), close to the west coast of the peninsula of

Malacca. There can be but little difference in the distance from Deli to Padang or to Penang; but as to Padang, the range of very high mountains with precipices, torrents, &c., and dense virgin jungles, lying between it and the tobacco district of Deli, form an impassable barrier; there is no direct communication. If a shipper of tobacco in Deli stood in need of a consular certificate to his invoice of tobacco, he would have to send it by letter to Padang, and it would take about a month before he could get an answer. The letter would first be sent by a small steamer (the sea-coast in front of Deli is shallow and only accessible to vessels of light draught) to Penang or Singapore, and if no steamer for Padang should happen to be in port at the latter port it would be sent to Batavia, Java, and thence to Padang, and the answer would be returned by about the same routes. But the vice-consul at Padang, or the consul at Batavia, for that matter, would find it difficult, if not impossible, to give his certificate as to the correctness of the invoiced price of tobacco to such an invoice, because there are no quotations of Deli tobacco there, nor here, or at Penang. (In the Singapore market report tobacco does not appear with or without quotation as an article of "Straits produce," notwithstanding Deli tobacco is a Straits product.)

In a commercial report published this year by the State Department the United States vice-consul at Padang writes upon the subject of tobacco cultivation in different localities of Sumatra, and, with reference to Deli tobacco, he says (to sum it up in a few words), while showing the great importance of tobacco planting at Deli, the large scale on which it is carried on, that Padang was so situated by nature as to prevent him from giving the details or *modus operandi* of tobacco planting, curing, assorting, &c., and thinks or suggests that the United States consulate at Singapore was in a better position to give this information. Now, he is probably right as to that, and I have in several of my annual reports dwelt upon this subject at more or less length. But what I know and reported about it, though Singapore is not in Sumatra, was not revealed to me in a dream; no, it was the result of unremitting, diligent inquiries, reading, and study. I will admit that my personal acquaintance with quite a number of Deli planters (some of them now dead and others retired wealthy, living at home), and my personal knowledge of agriculture brought with me from the United States, gave me a good deal of advantage in the premises without ever having visited Deli. But it is not my purpose, now, beyond saying that the cultivation of tobacco in Deli and in Langkat and Serdang (provinces adjoining Deli), has increased wonderfully from year to year, immensely, to write about tobacco planting, &c., repeating former reports, and only to show why Deli tobacco is shipped from (and invoiced at) the ports of Holland and not from Deli direct.

In the first place, as shown, the sea-coast of Deli is too shallow for transoceanic vessels. There is only one place, known as "Labuan Deli," near the mouth of the Deli River, which is deep enough to admit small steamers of about 400 tons or less, and all the tobacco produced in Deli and adjacent districts is sent to Penang (very little to Singapore, being a detour) for transshipment there in large steamers to Amsterdam and Rotterdam, which ports have been famous for the commerce in tobacco, coffee, spices, and colonial products generally since time immemorial, when the flag of the Netherlands waved proudly on many seas. There the tobacco is sampled, tested, priced, inscribed, sold, and shipped to all points. All Deli (or Sumatra tobacco for that matter) tobacco is cigar-wrapping tobacco and has many grades (probably more grades than any

tobacco grown in any other country), and in grading tobacco and pricing each grade justly a thorough knowledge and long experience is wanted, which is found in Holland. The tobacco planter in Sumatra, when he ships his crop, while he knows the exact quantity of what he ships, does not know, or only approximately, the value of it, because there is no market or appraisement of tobacco there, nor at Penang and Singapore; he has to rely entirely on his agent or factor in Holland as to appraisement, sale, and remittances. New planters, too, receiving advances from tobacco merchants in Holland are generally bound in writing by them to forward the entire product of their plantations to them or to such parties as they designate, so long as they remain in debt to them.

The circumstances under which a crop has been grown (wet or dry season), the proper time of cutting the plants, the curing (the most difficult part of all), assorting, and baling of the article have much to do with the price, and the planter may receive more or less than he anticipated; and the stock in the market of and demand for tobacco also influence prices. The tobacco, after having been thoroughly cured and being in a fit state for shipment, has to be assorted first. This is done first as to lengths of leaves, and there are several. Next, each length is assorted as to colors; very dark, dark brown, brown, light brown, yellow, spotted (ragged or damaged); each color length is then bundled, lettered, and baled. The more careful the assortment and packing, the better the price. All these intricacies in fixing grades and dealing with the article in Holland cannot be so well known (all depending on length of experience) on the tobacco estates in Sumatra. I could not certify consistently to an invoice of Sumatra tobacco shipped here to the United States, because, even if I had the samples, I could not appraise them, having no standard, nor find competent, reliable appraisers here to do that for me, tobacco not appearing in the list of export produce; and, for that same reason, the local forwarding agent of a Sumatra planter could not (as I had occasion to find out) make oath to the invoiced value of the tobacco and to the charges.

To give an idea of the importance of the tobacco exports from Sumatra to this colony, and the re-export thence to Holland, I quote from the trade statistics of 1884 and 1885, as follows:

Ports.	Piculs.	Value.
Received at—		
Singapore in 1884	3,890	$99,569
Penang in 1884	41,421	1,800,969
Singapore in 1885	1,897	52,610
Penang in 1885	57,320	2,273,821
Total	104,528	4,226,989
Exported to Holland from—		
Singapore in 1884		
Penang in 1884	42,915	1,923,089
Singapore in 1885		
Penang in 1885	64,934	3,999,109
Total	107,849	5,922,198

This shows a great discrepancy in exports over imports of tobacco imported from Sumatra and exported to Holland in the colonial trade statistics, for Penang especially, which to unravel does not lie within my power, unless it be that some tobacco sent from Deli to Penang for transshipment to Holland was through oversight only entered under the

head of exports and not, also, under imports. I believe that all of it, regardless of discrepancies, was Deli tobacco. These figures, at any rate, give an idea of the importance of the cultivation of and trade in Sumatra tobacco, and at what proportion the cultivation is on the increase in one year, from 1884 to 1885. I can remember the time when from 15,000 to 20,000 piculs was the total quantity of one year of Sumatra tobacco exported. Now what proportion of the entire export of Sumatra tobacco is sent to the United States, our own statistics and those of Holland must show.

This shown, and referring to the several articles embraced under the caption of Straits produce, I would say, before reporting upon them seriatim, that some of them experienced lively fluctuations with a gradual constant upward tendency, while others became much dearer through other causes than speculation alone, and again others remained almost normal.

EXPORTS TO THE UNITED STATES.

Black pepper takes the lead, with a vastly increased cultivation on the peninsula of Malacca, in Sumatra, Siam, Borneo, and in localities where formerly little or no pepper was planted. It is now about 85 per cent. higher, $20.50 per picul, than it was during the first years of my residence here, and not so long ago it was up to $24. For the benefit of the masses of our people who consume more or less of this spice, I would say, that as I see and understand it, there is in reality no need for such high prices. With due allowance to the plantation laborers for the depreciation of their wages, paid to them in Japanese silver dollars (which allowance they do not receive, but their Chinese "towkay" pockets when selling his crop), I call this spice, in view of its vastly increased cultivation (like three to four now to one in 1871 to 1875), very dear (not losing sight of the immense stock held by speculators) at $14 silver per picul (133⅓ pounds). This wild speculation in pepper originated essentially in Europe.

Pepper, unlike many articles of colonial produce, is one that will keep for a very long time without any discoverable deterioration, if not handled much. The United States, pro rata of population as compared with other countries in Europe, consumes more spices, of pepper, nutmegs, and mace especially, than any of them, and as to pepper, large quantities of it are used in curing meats on an extensive scale in meat-packing establishments and on the farms in our Western States in addition to household consumption. This consumption of spices, any kind, pro rata of population by any country, is pretty well known here in the country of production among exporters after long experience, and as most of the latter have branch firms in London chiefly, it is of course well known there as well.

I feel pretty certain that if our consuls in England, and the continent of Europe, were forbidden to grant their certificates to invoices of this spice (and any other Asiatic produce, for that matter), it would come down from its high horse pretty soon—reduce wild speculation; actual consumption more than speculation would fix the price of it—a reasonable one.

Singapore and Penang are the principal pepper-exporting places in the East (Padang, in Sumatra, and ports in Java export some), and only to satisfy speculation in Europe. I cannot see why not all of it should be exported directly to the United States instead of in this roundabout way by way of ports in England and Europe (keep the profits

at home). This would give at the same time more employment to American vessels than they now have at wretched figures (with much loss of time), in view of the immense seafaring competition, steam and sail.

To give a fair idea of the importance of the pepper trade here, in the country of production, and in other countries in 1884 and 1885, I will quote the exports, first from the records of this consulate to the United States, and next from the colonial trade statistics to countries in Europe; taking Singapore first, and giving only the value, not the quantity. (The average value per picul for the two years was about $18, Mexican.)

To the United States from Singapore, as per declared exports in this consulate in 1884, $554,099.89; in 1885, $195,788.72, as per trade statistics.

Countries.	1884.	1885.
Austria	$159,147	$224,918
France	185,203	149,247
Germany	168,203	249,218
Italy	13,127	274,753
Russia	38,610	55,408
United Kingdom	1,891,566	1,598,358

As to Penang and declared exports thence to the United States, I have not at hand the figures from the consular agency for 1884 and 1885 and only for the years ending September 30, 1885 and 1886 (sent with my first part of this report), and must, therefore, quote from the colonial statistics, which, in this instance, I believe to be approximately correct, viz:

To-	From Penang.	
	1884.	1885.
United States	$34,895	$59,303
Austria		265
France	19,984	33,616
Germany	66,300	75,878
Italy	18,786	8,260
United Kingdom	1,209,199	1,612,352

Holland does not appear in the pepper export statistics, because, no doubt, this spice was exported from her ports in Netherlands India to Holland direct, and I have no means of knowing how much. But the figures above shown speak for themselves. I think that Italy received less pepper in 1884 than she consumed, and much more in 1885, and that some of the latter was probably shipped via Genoa to countries north of Italy. I think that Russia is credited with less than she consumed, and received supplies from British, Dutch, or Hanseatic German ports (as also the Scandinavian states, which are no tmentioned at all in the statistics). Reviewing the exports, as above, to the United States and to the United Kingdom, we find that the former, with a population of about 60,000,000, received only $844,088.61 worth, while the United Kingdom, with about five-eighths to three-fourths of the former's population, received $5,811,475 worth for the same period, *i. e.*, 1884 and 1885. Now, I don't believe that one-half of that amount was consumed in the United Kingdom; but supposing it was, the question remains,

"what became of the other half?" Granted that some of the latter was re-exported to different parts of Europe, I firmly believe that the largest portion of it was sold and shipped to the United States, and this belief I base upon what I heard here from reliable sources. For the rest, our own trade statistics of imports from the United Kingdom and other ports of Europe will give decisive information in the premises.

As to *white pepper*, though its export is much smaller (about one-fourth of the black), because much dearer, the same remarks hold good, and perhaps, with regard to shipments from English ports to our own, were more so. I will only mention the exports of it from this colony in 1884 and 1885 to the United States and the United Kingdom, leaving out countries in Europe and quoting from the same authorities as in black pepper, viz:

To—	From Singapore.		From Penang.	
	1884.	1885.	1884.	1885.
United States	$18,758 65	$6,666 06	$3,100 00	$17,200 00
United Kingdom	496,068 00	492,670 00	258,594 00	345,608 00

I would mention here that the trade statistics of Singapore as to this spice do not agree by great odds with those of this consulate based upon declared exports. This, I hardly think, is the fault of the statistician, but of the parties engaged in the said exports by not reporting in accordance with actual facts (deception in trade or strategy arising from trade jealousy among themselves).

	1884.	1885.
My statistics, as above	$18,758 65	$6,666 06
Port statistics	17,865 00	13,644 00
Less	893 65	
Over		6,977 94

As a merchant exports here on ship to his agent in London, and instructs him to try the markets of England and the United States, to sell in that which pays the most, such discrepancies are easily accounted for, but could not occur if any consul there refused his certificate. At the same time this tends to mislead other exporters here as to actual shipments to America and England. The exports, as actually or not actually intended (a port of destination must be shown, but not under oath or solemn declaration), are reported to the port export office, and by the latter to the chamber of commerce, for general information in its market report. The consul has no remedy to prevent such deception, as he can only certify to the invoices presented to him. There his jurisdiction in the premises practically ends. It is only after the publication of the port statistics by the local government that he can discover and expose such deception or "differences," if they are not deceptions, in his commercial report. I have often enough had inquiries, "Did such a firm ship such goods by such a steamer via London to America?" but I never yet answered them in a single instance, and instead told them to find out at the export office or chamber of commerce. The trade statistics nowhere agree with my own statistics—based upon duly de-

cleared exports in this consulate—and no one, before their official publication, ever came to ask me whether they agreed.

As I have been reporting on white pepper, I would briefly (as I have reported at length with description of producing it, the process in former reports) say that it is produced from fully ripe berries (light crimson in color and in size about the same as an average currant), from the same vine that yields black pepper, the latter being plucked green, before maturity.

NUTMEGS.

This spice, at least, experienced only slight fluctuations during the last two years, being at times as low, if not a little lower, than during the first few years of my residence here, and at times a little higher, and now they are again at about normal quotations. The size of the nut has much to do with market quotations, the smaller the nut the lower the price. Between largest and smallest, if in sound condition, there is a margin of from $15 to $20 per picul, those of 110 to the English pound being the highest priced. Those exported from Singapore come essentially from the Moluccas (Banda Islands, Amboyna, and even from New Guinea, where the nutmeg grows wild). Those exported from Penang are the actual product of Penang Island and immediate vicinity on the main land, where the nutmeg tree is largely cultivated, with increasing tendency, and does well. During my long residence here, I have by close observation and statistics discovered what may not be generally known, that our country buys and consequently consumes more nutmegs than the whole continent of Europe taken together, and before the repeal by our Government of the 10 per cent. discriminating duty on Eastern goods imported from places west of the Cape of Good Hope (referred to in my first part), the colonial statistics showed that far fewer nutmegs were exported to the United Kingdom than to our country. Since the repeal of said act, the tables have turned, and judging from the same statistics and my own, which I quote below, it would seem that the British have become enormous nutmeg consumers, beating us badly. But that is not it. I have no doubt that they are shipped from there to our country, the same as pepper, tin, and other Straits produce upon consular invoice certificates obtained there, and I opine that they are a remunerative article of commerce with a margin of 15 to 20 per cent., depending on the sizes of the nuts, with speculation thrown in.

I quote from the same authorities, as in pepper, the exports of nutmegs in 1884 and 1885 from Singapore and Penang to our country and the United Kingdom, viz:

From—	To United States.		To the United Kingdom.	
	1884.	1885.	1884.	1885.
Singapore	$150,611 61	$172,769 19	$102,100 00	$63,510 00
Penang	43,295 00	49,185 00	225,941 00	172,453 00
Total	193,906 61	221,954 17	328,041 00	235,963 00

There was an increase in 1885 to the United States and a decrease to the United Kingdom; but it will be found hereafter that in 1886 the reverse was the case. None of the nutmegs (or any other Straits produce)

exported hence to England were carried in American bottoms, and those exported to the United States were largely carried by foreign vessels, prominently British steamers.

The nutmeg cultivation is on the increase not only at Penang but in various parts of the Straits Settlements and adjacent Malay states under British protection.

TIN.

Tin continues to be one of the most prominent articles of export, and the mining, therefore, in the peninsula of Malacca, where it is found in various provinces in inexhaustible quantities, employs many thousands of laborers, chiefly Chinese. The mining is that of "flood tin," not rock, and this means that it is taken from the lowlands near the mountains, where it is found in seams or pockets, 10 to 20 feet or more below the surface level, in the shape of, or appearing like, coarse black sand, with here and there a mixture of tin, all particles of gold (dust) in not paying quantity. To get at the stream tin means a great upheaval of soil, dumping of water from the pits, the washing of the exhumed stream tin, and the smelting of the latter (in most places the pumps, washing apparatus, and smelting furnaces or "arrangements" are of most primitive and simple, yet ingenious, character). The ore is smelted in slabs of irregular shape at the mines and sent to Penang and Singapore to be resmelted into regular uniform marketable slabs or blocks, and at the same time purified, and then to be shipped. The principal tin-producing provinces are Larut (pronounced Laroot), a sub-province of Perak, and sundry other localities in Perak south of Larut, and in places north of and east of, but near the Straits Settlements, under Siamese suzerainty, among which "Junk Ceylon," an island north of Penang, near the coast of Quedah (a Malay province under Siamese suzerainty), produces much.

All the tin from this island, Larut, and Perak goes to Penang for resmelting and shipment. South of Perak, the provinces of Salangore, Lingah, Sungi-Ujong, and parts of the settlement of Malacca produce much tin, as also do certain parts of the "Nine States" (Kusare as "Negri Sumbilan") adjoining the states just mentioned on the west side, thus situated in the center of the peninsula, so to say. Some good roads through the jungle, to connect the tin districts, form an outlet of the "Nine States" with the west coast of the peninsula, are now being built by the colonial government (*i. e.*, the latter advances the money and "holds the respective districts as collateral," which in my opinion means about the same). From the mining districts situated south of Perak, just named, and also from the Malayan-Siamese provinces on the east coast, as Patani, Kalantan, and Tringany, and the independent provinces of Pahang (this is also rich in gold, and mines are in operation), the tin is sent to Singapore for shipment. The tin mining, capital and labor, is practically in the hands of the Chinese, or has been thus far; only in Salangore, three or four years ago, Europeans, as owners or as managers and superintendents, engaged in the business. One stock company, formed at Hong-Kong, took lands there and operated them, but somehow or other it did not succeed and "wound up." Another party, headed by an intelligent, energetic, and persevering young Scotchman, well known to me, is, from all I can learn—thanks to water power, engineering skill, and labor-saving machinery—more successful, though it was at first thought they would not be able to compete with Chinese cheap labor. They employ Chinese laborers in any

and every thing where Chinese labor is wanted. In other parts, especially in Larut and Perak, other Europeans embarked in the enterprise, but I have heard of no success. It is on rich tin lands a battle between Chinese cheap labor with a simple, primitive mode of working, and Europeans with a civilized mode of operation and cheap manual labor where applicable.

Tin during 1884 and 1885 did not experience such violent fluctuations as did some other articles of export; it fluctuated between about $30 and $33 per picul. But during the latter part of 1885 and this year it kept increasing in value slowly and steadily until it got to be as high as $36. The cause of this rise is to be attributed to an essential decrease in the outputs in Larut and Perak, owing to the mines in operation becoming worked out. This should not be understood as if the province or all the tin-bearing lowlands had become exhausted—far from it. It means that fresh pits on new lands, near the worked-out ones, had to be opened, made ready for putting out the ore (to uncover the latter). This is very heavy work; it involves the cleaning and burning of jungle, the district being wild, uncultivated land, and all such land in this country being covered with jungle or swamp, the drainage of the land, digging more shafts, cutting and leveling roads, building huts, &c.

It is only a matter of time and very hard labor—a few months; the ore once uncovered the outputting can begin and become equal to what it was before; thus the price will gradually resume a nominal figure, which I take to be under existing circumstances (stream tin mining) about $30 per picul. Stream tin is also found in the beds of rivers, creeks, and runs near the mountains, and shallow places, and this is taken up during dry spells of weather, and washed by poor Chinamen working independently for themselves; but it is not remunerative, and only affords them a scanty living. In alluvial bottom-lands, where there are seams or large pockets of it, it pays. Nearly all the alluvial lands and swamps near rivers and not far from high hills or mountains on the peninsula of Malacca are tin bearing, and many a rice field covers heavy fortunes. Thorough geologists and mineralogists by first examining the mountains, *i. e.*, the rocks and different strata thereof, have no great difficulty in ascertaining and pointing out in what direction near the base of a mountain (some places for miles are strictly alluvial) stream tin is to be found. In fact, here and there, intelligent Chinamen find it sooner than scientific men, and gold, too. When once, in a great many years to come, tin-bearing paying bottom lands are exhausted, the uplands and mountains stand in reserve for rock mining, which in localities are known to be immensely rich, not only in tin, but also in iron, galena, copper, and precious metals, &c. A new era will then set in, and it is dawning now, if not for tin only, for gold at least; for in Pahang gold mines (two or three) operated by large stock companies with capital from England and Hong-Kong, are in full run, and in Borneo, in the territory of the British North Borneo Company, also.

As to the export of tin to the United States, the same remarks hold good as to other articles of Straits produce since the repeal of the aforesaid 10 per cent. discriminating duty act. The quantity and value of Malacca tin shipped to the United States in 1884 and 1885, as shown in my tables of declared exports, is, I fear and believe, only a small portion of such tin shipped to the United States, and the difference was, no doubt, shipped from London. I quote from the same authorities as in above-mentioned exports the values of shipments in 1884 and 1885

from Singapore and Penang to the United States and the United Kingdom, leaving out continental European countries, viz:

From—	To United States.		To the United Kingdom.	
	1884.	1885.	1884.	1885.
Singapore	$958, 852 53	$729, 790 97	$2, 205, 601 00	$2, 260, 993 00
Penang	416, 014 00	612, 788 00	3, 662, 217 00	4, 167, 314 00
Total	1, 374, 866 53	1, 342, 578 97	5, 867, 818 00	6, 428, 307 00

It should be borne in mind, too, while considering the enormous differences between exports to our country and England, that the latter is a tin-producing country, *i. e.*, Cornwall.

I would also mention that the trade statistics for Singapore show much larger exports of tin to the United States for 1884 and 1885 than does any record of declared exports for the same period, viz, as per trade statistics for 1884, $1,146,805, and for 1885, $824,069, being proof conclusive of "erroneous" reports to the export office of the port by the respective exporters.

RATTANS.

This useful article not only continues to be greatly in demand, but the demand for it increases constantly, and with it, its price; and there is good reason for it. During the first three or four years of my residence here its value ran from about $2.50 for lowest grades to about $5.50 to $6 for the best. There are many grades of it, length, thickness, color, places of growth, &c., coming into consideration. At that time the heaviest exports were to the United States; next came Germany, and the United Kingdom about third. From that time out the demand for it, and with it the cost, increased gradually and steadily until the average value of all grades rose to be at the present time about $13 per picul, and the depreciation of silver had really very little to do with this trebled rise. I think that the most prominent cause is to be found in the fact that the native rattan gatherers on the Malayan peninsula, in Sumatra and Borneo, whence the largest supplies are obtained, had, to keep step with the greatly increased demands of the market, to dive deeper into the fastnesses of the jungle, seek new fields, go much farther from home to cut it, and could, in view of distance and natural obstacles, carry less at a time than was formerly the case, when, at a short distance from his hut and rice fields—say, a mile or two—he could easily find all he could gather and sell, or that he was hired to gather. Increase of population and of cultivation of soil, through immigration or otherwise, with consequent corresponding jungle clearing in certain localities, once very productive in rattans and other jungle produce, had also a tendency to enhance prices, because the rattan will not grow near cultivated land, fire, or smoke; it dies out. Further, it is to be considered that the demand for it for local use and appliances is immense, something little thought of in civilized countries. Where, in the latter, nails, screws, and braces and wire, &c., are used, the native, outside of city or towns with modern buildings, in ninety-nine cases out of one hundred uses the rattan or rattan thongs; he builds his dwelling place without driving a single nail. With the woods, bamboo, palm leaves, and rattans of local growth and the use of a few simple tools

he completes all and knows how to make a very creditable job of it; and in all sorts of handicraft, on shore and at sea, he makes use of the rattan, bamboo, fibers, leaves, and woods that an all-kind Providence has planted considerately for him. So, all considered, I don't look for a decline in the prices of rattans hereafter, and rather for an increase, if the demand remains unchanged. A greater, freer use of the willow and other elastic woods or creepers at home in the manufacture of basket work might tend to keep the price of the rattan normal, but not cheaper.

I am not quite as positive about the exports of rattans to the United States, as to whether the declared exports thereof in this office comprise all exported or as to whether an additional quantity was sold in and sent from England, but on consulting the colonial trade statistics with my record of declared exports and with port statistics anterior to the repeal of the 10 per cent. discriminating duty act, I am inclined to think that re-exportation and sale in England did take place all the more, as well-informed merchants coincide with me that our country buys more rattans than any in Europe. Before the repeal of the said act the United Kingdom was about a good third importer of rattans, as compared with other countries, and now it stands nearly first. Whether the manufacture of rattan goods in Great Britain assumed such vast proportions so as to need more rattans than our own country I have not the means of knowing to a certainty, but I don't believe it just at present. Thinking it might be interesting to have the figures of rattan exports for 1884, and 1885, I quote them from the same authority for the United States, the United Kingdom, France, and Germany, viz:

To—	From Singapore.		From Penang.	
	1884.	1885.	1884.	1885.
United States	$649,744 76	$547,183 45	$5,100 00	$25 00
France	98,847 00	92,749 00	250 00	.....
Germany	73,409 00	212,484 00	4,690 00	4,762 00
The United Kingdom	402,640 00	623,690 00	46,019 00	76,059 00

I may mention that Penang has never been noted for the exportation of rattans. It ships what it receives from Sumatra, on the west side of Malacca Straits, and from the nearest Malay provinces on the peninsula close by; still the preponderance of rattan exports to England is very great over those to the United States.

Rattans are so very essential to sailing vessels loading here for the United States as dunnage and for the completion of a cargo (to fill up the hold), that every encouragement should be given towards their sole export from this their country of growth or production direct to the United States instead of their admittance from Europe, unless a discriminating duty, if imported from Europe, be levied. The same recommendation holds good for tin and gambier, serving as dead weight in loading vessels and (tin) for trimming ship. The absence of dead weight, when a vessel on berth is ready to receive cargo, causes her serious and expensive delays, and but for the shipments via Europe this would not be the case. In fact, in the interest of American navigation, all articles of "Straits produce" should be shipped from and declared in this colony for the several reasons above stated and to help our ships.

GAMBIER.

Another very important article of export is gambier, of which I have written much in former reports. The cultivation of and trade in it, until delivered to the European exporters, is entirely in the hands of the Chinese, and goes hand in hand, to a great extent, with pepper planting, as the decocted leaves of the gambier plant serve as fertilizer to the pepper vines. The demand for this article has been on the increase; and for various reasons, chief among which, next to speculation, that gambier exhausts the soil in a short time, needing frequent changing. The price of it increased steadily within the last three or four years until at one time it reached about $7.50 against $5 (per picul) previously. Lately it receded to about $6. Gambier is extensively used in Europe and America, chiefly for tanning; also for dyeing, medicinal, and chemical purposes. To what extent gambier from this colony (this port, Singapore, being the only and actual place of and for its export) is shipped via England, and invoiced there for the United States, I have no means of knowing, but I think it amounts to a goodly figure for 1884 and 1885, for which periods I quote the exportations to the United States, the United Kingdom, and various countries in Europe, from the same authorities as above, viz:

To—	From Singapore.	
	1884.	1885.
United States	$482,843 32	$778,241 64
Austria	52,521 00	86,006 00
France	446,390 00	354,791 00
Germany	225,915 00	216,983 00
Italy	71,417 00	45,443 00
Java (no doubt for Holland)	588,822 00	485,520 00
The United Kingdom	3,727,078 00	1,850,535 00

None was exported from Penang to said countries.

I will not close my remarks upon gambier without alluding to the great adulterations carried on by the planters in the preparation of the article, and to the great frauds committed by the Chinese towkays and middle traders, who supply the exporters with the marketable article already packed in matting, in square pressed bales or cubes.

These frauds, commencing a few years ago little by little in large deliveries, have now assumed very large and alarming proportions, and have naturally become the cause of much vexation and trouble to the European exporters, and most earnest discussions have taken place in the chamber of commerce as to the best means to overcome the difficulty. As the tea trade in China is in the hands of the Chinese solely up to the time of delivery, so the gambier trade in this colony, in like manner, is in the hands of the Chinese, and the merchants (here at least) appear to be powerless. The "Kongkek," or Chinese gambier syndicates, simply say, "You must take it as we have it or you won't get any." No Europeans are engaged in gambier planting, and the exporter is forced to take it at the stipulated market prices, pay goodly commissions to his middle trader, and to ship it to his customers in Europe or the United States, well knowing that the complaints of the latter will be well founded, and of course "the brunt of the fraud" falls upon them, and those that use it in manufacture. I am told that the bales of gambier brought to market are in most instances more or less

adulterated; that they contain admixtures of pieces of sticks, stones, clay, and lumps of pressed-out gambier leaves, &c. No wonder the Chinese planters, towkays, and middle traders, in great and steadily increasing numbers, outstrip the Europeans, who slave out here in this trying climate to gain a competency on which to retire, by heavy odds, and are enabled to display luxuries in houses, gardens, fine equipages, and horses, alongside of which the local Caucasians almost sink into insignificance. What surprises me is that the colonial government in the face of the serious complaints of the exporters in and outside of the chamber of commerce, takes no steps to prevent these wholesale adulterations, though I am fully aware that in a colony with only one regiment of infantry and a company of artillery, and a police force none too large for such a population (!), where the Chinese in city and country overawe the Europeans and well-disposed natives, by hundreds upon thousands, it would perhaps be somewhat risky to seize and destroy, wherever found, quantities of adulterated gambier. I am investigating this matter with all the means at my command, and shall report results hereafter.

COFFEE.

The export of coffee to the United States used to be heavy during the first years of my residence here, and then fell off gradually from year to year, until now it amounts to little more than nothing. The exports consisted essentially of coffee grown in the province of Bontyne, situated along the north coast of Celebes, near Macassar, and on the island of Bali, situated between Java and Celebes; also in parts of Sumatra not subject to Dutch Government monopoly, and in various other places round about here (in smaller quantities). By far the largest portions came from Bali; next, from Bontyne; and, thirdly, from Palunbang, Sumatra; and all of it was then "coffee Arabica," which means that it was mountain coffee, grown at an altitude of about from 1,000 to 4,000 feet above the sea level (below 1,000 feet this kind of coffee does either not grow successfully or not at all). In our American markets this coffee, exported from this port, used to be known under the name of "Singapore Java," which was a mistake, as it never saw Java, and was not grown on Singapore soil, nor that of the peninsula of Malacca. It would not grow on this island, because no hill is high enough for its successful cultivation; but Liberia coffee, which can be grown successfully on low lands clear down to the sea-coast, does well here, is a great success, in fact, and of fine quality, and the same is true of the peninsula of Malacca, and, in fact, of nearly all parts of the Indo-Malayan Archipelago.

The port of Macassar, so close to Bontyne, commenced to absorb by degrees the coffee crops of that country and to ship it direct from there to transoceanic ports, and succeeded in getting nearly all and in giving the port a greater shipping importance; for, in addition to Bontyne coffee, it received (and receives) many valuable products, not only from the island of Celebes, but also from the east coast of Borneo, which belongs to the Netherlands, and the many islands lying scattered between Celebes, with East Borneo and New Guinea and the Spanish Malayan Archipelago, which takes in the Moluccas, through the daring Boogis traders inhabiting Celebes. Macassar has thus succeeded in entering in several articles of exports into lively competition with Singapore, with coffee leading (though it is now reported, and I do not doubt, that the coffee-leaf disease is doing sad havoc in the Bontyne district),

which will prove a serious blow to said port. The same disease has ruined the coffee Arabica plantations of Ceylon, has also made progress in several districts of Hither India, in Sumatra, and Java.

This leaf-disease, known under the name "*Himalaya vastatrix*," seems to be spreading in the coffee-producing countries not only of Asia, but also of South America. As a consequence, coffee crops everywhere, when not an entire failure, are falling short, and prices have risen at least 50 per cent. within the last year, from $13, about, for Bontyne and Bali, to $20 per picul, and other inferior grades nearly as much. The article has become dear, but I think it will not become dearer, or much dearer, so long as coffee Liberia is not attacked by leaf-disease. Here and in neighboring countries and islands it escaped it so far, and I have not learned that plantations in other parts of India have been attacked by it.

Here, on Singapore Island and on the peninsula of Malacca and elsewhere in Malaysia (British, Siamese, and Dutch), the cultivation of Liberia coffee commenced in earnest only about ten years ago. It grew so well and vigorously that the demand for seed became very great; and, as none was attainable here and all had to come from Liberia via London, I remember that as high as 50 cents per seed was readily paid, and it proved a good investment for the planters. It grows in any fairly good soil, be it bottom or hill land, so it is not swampy, and some of the seedlings where well tended and situated commenced to bear after from 20 to 24 months; but it may be safely asserted that the trees yield a good crop in or shortly after the third year, and blossoms, and green and ripe berries studded thickly can be seen at one time on one and the same tree. When well tended and fertilized a little from time to time and kept mulched the yield is very heavy and the beans are very, aye, unusually, large and well formed, resembling Padang (Sumatra) coffee (called in our country Old Government Java) so strongly as to hardly show a difference by which to know one from the other. Under the captions of "agriculture" and "horticulture," in a future report, I shall have more to say about the acreage and localities of Liberia-coffee plantations within my consular jurisdiction and near it, and other items of interest relating thereto.

When about six to seven years ago the first crops of Liberia coffee were sent to this market, some claimed that it was as good as the best coffee Arabica; others claimed that while it had a fine flavor, it was not as strong as the latter, and that it was bitter; and again, others condemned it as a poor coffee that would never pay. Now, as to its being bitter, I can say from my own experience that when roasted in a green or half dry state it has, no doubt, a bitter subtaste as if a trifle of quinine had been stirred up in the water, but not so bitter as to be disagreeable; to the contrary, one rather learns to like this slight bitterness (in well-dried coffee it is hardly perceptible). As to its flavor and aroma, I prefer it to genuine Mocha coffee, and many others say the same. And as I have been alluding to Mocha coffee (Arabian), is it not strange to the outside world that large quantities of "coffee" (the colonial trade statistics make no discrimination between coffee Liberia and Arabica, and call all, no matter whence imported here, only "coffee") are shipped from this port to Arabia (port of landing not named in the said statistics)? but such is an actual fact. Now, there are only two ports in Arabia that are visited by steamers sailing hence. One is Aden, just south of the Straits of Bab-el-Mandeb (Red Sea), and the other is Djiddah, in the Red Sea. Now, Aden is the only and actual port of export of Mocha coffee. The mountains of Mocha (visible to

travelers in the Red Sea) lie from north of Aden, stretched out for a goodly distance along the west coast of the Red Sea. The coffee is brought to Aden by caravans and by Arab dhows; and Abyssinia, opposite, sends coffee, considered fully as good as Mocha, to Aden, which port is touched by every steamer going on to Suez and Europe, whether in quest of coffee or other goods, or to discharge cargo or to receive coal and other supplies, and all, whether they have business or not, for the production or obtaining of health certificates.

As to Djiddah, that port as a rule (surely as far as steamers from the far East are concerned) is only visited by steamers chartered to go there to land or bring away Islamitic pilgrims (Hadjis) visiting Mecca. If any coffee is landed there it is for local consumption only, and not for export. The colonial trade statistics show the following coffee exports from this port to Arabia, viz:

Year.	Quantity.	Value.
	Piculs.	
1884	6,130	$72,176
1885	968	12,714

I believe that all this coffee was landed at Aden, because supplies taken by ships and passengers for Djiddah for their own use on the voyage are not reported to the export bureau of the port. What kind of coffee this was and to what use it was put in Aden I know not, but I do know that much coffee is bought under the name of and used in the belief that it is Mocha coffee in our country and in Europe also. How much coffee was shipped from the coast of Malabar, from Java and Sumatra to Arabia during the same said period, I have no means of knowing. The coffees produced in the countries just mentioned are, as is well known, of high reputation.

Whatever the fate of coffee Arabica may be, in consequence of leaf-disease, the ports of Singapore and Penang can export now a good deal of Liberia coffee, and can increase the exports of it from year to year at a pretty high rate over each last.

The exports of coffee to the United States as declared in this consulate amounted to, in 1884, $11,230.81, and in 1885, $48,607.72.

The exports to Australia and countries in Europe, as per port statistics, were as follows:

Exported to—	1884.	1885.
Australia	$2,342	$1,343
Austria	24,556	7,825
France	57,748	3,325
Germany	11,900	30,036
Holland	1,950	635
Italy	7,635	.....
The United Kingdom	12,835	18,220

What surprises me is that the United Kingdom does not come in for a much greater share of the exports in this instance.

The shipments to Holland, I think, consisted of Liberia coffee, sent to try the market.

The imports of coffee from all sources in the Indo-Malayan Archipelago, among which the Philippine Islands, which produce a coffee I

consider second to none when well treated and cleaned, amounted as per port statistics to as follows:

Year.	Quantity.	Value.
	Piculs.	
1884	48,977	$613,008
1885	25,917	351,328

This falling off in 1885 I attribute to two causes, viz: (1) Direct exports from ports close to the countries of production, to the trans oceanic countries of consumption, and (2) to increasing coffee-leaf disease. A large proportion of the coffee received here is partly consumed here and partly sent to Burmah and Upper India for consumption there. Penang has never been noted as a coffee-trafficking port, but receives now the Liberia coffee, produced in the provinces on the peninsula of Malacca, lying nearer to Penang than to Singapore, and also from Deli, Sumatra, where some of the planters plant not only tobacco but Liberia coffee as well.

TAPIOCA.

When I last reported about this article, prices had become very low, and I pointed out that at the figures then existing tapioca planting was not at all remunerative (*i. e.*, about $3 to $3.50 per picul). About six years ago the article saw its palmy days for good prices. It was very profitable then and induced many not only to plant it, but to plant on an extensive, costly scale, and much of it on borrowed capital at a very high rate of interest. The planting necessitated the purchase and putting in place of costly machinery and fixtures for the manufacture of the root into the marketable article. Some of the planters became more or less ruined through the sinking of prices, and those that did not, being wealthy enough to survive it, accordingly, as the roots matured and were taken up, planted in place thereof Liberia coffee with good success, as the soil had become thoroughly loosened and mellow through the deep-striking tapioca roots. And I have no doubt that coffee will in the end prove far more profitable, let the prices for tapioca be what they will. A tapioca planter on this island, a Frenchman, full of energy and hard sense, the owner of about 4,000 acres, of which nearly one-half stood in tapioca, has turned, and is turning gradually all into Liberia coffee. He has now over 300 acres of bearing trees, over three years old, and over 200 of later planting, all in excellent condition, and has given up tapioca altogether. This will pay his losses in tapioca culture and leave him a good income besides, not to mention the great enhancement in the value of the land itself.

The prices gradually and slowly rallied early in 1885, and rose since then to be at the end of that year very nearly as high as six years ago.

The processes of the manufacture of the tapioca root into marketable articles, as "flour," "flake," and "pearl," I have described in former reports and will not now repeat them. Tapioca flour is cheaper than "flake" and "pearl," because it has not to undergo the process of being shaped into "flake" or "pearl" and subsequently toughened by slow roasting and stirring in pans. There is only a small difference in price between "flake" and "pearl." At the end of 1885 the two latter had risen from about $3.50, when I wrote my last report, to about $5.

The proper manufacture and clean appearance of the article, and uniformity of color, have much to do with the price, with a margin of 20 to 50 cents per picul. The main bulk of exports of tapioca consists

of "flake" and "pearl" (more "pearl" than "flake"). Shipments of tapioca flour have become rather rare, while those of sago flour increased.

Our country is a good customer and consumer of tapioca. As per declared exports in this consulate, the shipments of it (all kinds) amounted:

1884 to	$108,623 43
1885 to	250,539 34

The trade statistics of the port don't agree with mine in this any more than in other articles of export, showing as follows for all kinds of manufactured tapioca to the United States, viz: for 1884, $91,554, and for 1885, $216,839 (difference to be explained by the exporters).

Penang exports a good deal of tapioca, the product of the provinces on the peninsula near by, but more was exported thence to the United States in 1884 and 1885 according to Penang statistics. The exports of all grades of tapioca to the United Kingdom, as per port statistics, were as follows:

From—	To the United Kingdom.	
	1884.	1885.
Singapore	$573,849	$540,700
Penang	298,230	268,900

Whether any portion of the said exports to the United Kingdom (far exceeding those to the United States) was sold in and shipped from England to our country, and, if so, how much, I cannot prove by official authority, but I have every reason to believe it was the case.

Australia is a fair customer for tapioca, receiving about three-eighths of the total quantity exported to the United States. Continental Europe receives proportionately very little, Germany the most.

SAGO.

When I last reported on this article it was unusually low as compared with former years, and since then the prices not only never rallied, but had rather a further though light downward tendency, notwithstanding that its export rather increased. The secret of the prices slackening, instead of rallying in view of increased exports, is, I think, to be found in greatly increased production and to a great increase in the consumption of tapioca. The chief localities of production are to be found in the southeastern Malay Archipelago, including the Moluccas, when in the absence of rice planting it is the staff of life of the native population, which understands to make a good bread of it from the raw article; also, and prominently in Borneo, which contributes by far the largest proportion, and, lastly, on the Malay peninsula in several places and on islands near it. Before the British North Borneo Company made settlements in and commenced the development of the resources of North Borneo in several places, especially along navigable rivers (some of which are large and navigable for a good distance into the interior), Sarawak, Pontianac, and Labuan with Brunai, were in the main the only exporting places of sago in Borneo, where the palm both grows wild in the jungle and is largely and easily cultivated. The island of Borneo being a large country (I might almost say continent), much

larger than the whole United Kingdom of Great Britain and Ireland with all their outlying islands taken together, and the resources of the interior in several directions having been tapped, and in parts more or less developed by the said company and enterprising parties, sago, among other products, such as rattans, gums, rubber, and gutta-percha, edible birds' nests, &c., could be exported and sent to Singapore. But aside of this, on the Malay peninsula, here and there, native and even European planters have of late years taken to sago planting. The palm does best in alluvial river bottoms, but will also grow well on good uplands, and its cultivation is on the whole a good safe investment. If, for instance, the heavy timber has been taken off from a suitable piece of land, and one wishes to make the land yield some profit without incurring heavy expenses, all he has to do is to stick pieces of sago palm root at reasonable intervals for good growth into the ground and then leave it alone for about five to six years. By that time the palm will have matured, can be cut down, and the pith taken from it. The yield of pith per palm is about six piculs, worth in the raw state, at present low prices, 80 to 90 cents per picul. From the same root a new growth may be had for many years to come. Sago planting is, therefore, so long as the ground is not wanted for anything more valuable, a very safe and profitable enterprise.

In sago I make two classes, viz, sago flour and pearl sago, because the latter is from 80 cents to $1 dearer per picul than the former.

The exports of pearl sago to the United States as contrasted to former years, fell off greatly in 1884 and increased a little in 1885; but to the United Kingdom, the exports, as compared with the United States, were enormous, as per port trade statistics. As per declared exports in this consulate, the exports were as follows:

To—	1884.	1885.
United States	$3,953 95	$8,999 61
The United Kingdom (as per port statistics)	137,685 00	215,189 00

In this instance the port statistics show the following exports to the United States, viz: 1884, $3,579; 1885, $8,487.

SAGO FLOUR.

Of this article, the exports to our country were ever so much larger, because it is used for various purposes in manufactures (I think much of it in that of starch), besides cookery and confectionery. Its price being very low, at present only about $2.15, silver, per picul, and the article itself very wholesome and nutritious, it appears to me it should find ready purchase among the masses, and I am rather surprised that not much more of it is directly imported from here. If one-half of what is exported to the United Kingdom is consumed there, then the demand for it must be lively among the masses, besides what is used in sundry manufactures. As per declared exports in this office, the exports of sago flour from this port were as follows:

	1884.	1885.
As per port statistics	$39,130 62	$47,485 89
To the United Kingdom	550,650 00	580,[illegible] 00

The port statistics show exports to the United States as follows: For 1884, $34,543; for 1885, $40,324.

The difference between "declared exports" and "port statistics" (also in pearl sago) can be explained by the shippers only. Penang, small quantities excepted, is not a sago-exporting port; none was exported to the United States nor to England.

GUM COPAL.

In the importation of this article the United States exceed every other country by great odds, and, as I look at it, nothing could possibly denote the improvement or the decline of business and manufacture in our country better than the exports hence of gum copal.

The demand for it has been steadily increasing since the beginning of 1884, and its price rose accordingly. Gum copal is a rosin of the earth (but also of trees), though some deny it. When trees exude so strongly as not to give the resinous fluid time to thicken and form gum on the bark, the ground receives it and vegetation covers it up. (I saw this myself). It is found in deposits or layers near the surface of the earth on many of the islands of the Malayan Archipelago, prominently in the Southeastern, with Celebes, Timor, and the Moluccas (much of it comes from Ternate, Amboyna, and Macassar); also from Borneo, Java, Sumatra, and the Malay peninsula, the first-mentioned part of the Archipelago furnishing the most.

To show the enhancement of the price, I will quote from the colonial trade statistics the receipts from all sources, quantity and value aggregated, for 1884 and 1885 at this port, Penang being only a small contributing factor in gum copal for Singapore, viz:

Year.	Quantity.	Value.
	Piculs.	
1884	23,037	$145,708
1885	19,864	153,600

Gum copal is received here in the raw condition, *i. e.*, with earth and ground débris, just as it is dug up by the natives, adhering to it, and has to be cleaned and "chipped" before being exported. The "chips" and dust are occasionally also exported (they contain a fair percentage of pure gum) at low prices. It is a matter of interest (!) as well as curiosity to note in the colonial trade statistics what effect this "cleaning process" has on the weight and value of the article between imports and exports, as follows:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	23,037	$145,708	23,917	$159,745
1885	19,864	153,600	19,779	168,927
Total	42,901	299,308	43,696	328,672

This, then, is a very strange showing, even if some old stock from 1883 was exported in 1884 or quantities were received from native prahns

without being reported at the port import bureau, since to judge from said figures it cannot well be accepted that at the end of 1885 any stock was held for exportation in 1886. How the "dust and chips" were or are to be accounted for, since as per statistics 795 piculs (clean or unclean? if claimed "clean," all the worse, since it arrives here in the unclean state) were exported in excess of receipts. If it is claimed that those statistical figures are correct, with "dust and chips" (and there were shipments of it) nowhere mentioned or accounted for, it will take a smarter mathematician than I am to explain this most astonishing "excess." The excess of $29,364 is easier explained, *i. e.*, in charges of receiving, shipping, weighing, cleaning, packing, shipping, insurance, commissions, &c., though very large. The statistical figures show upon calculation that for the said two years the average import price was $6.97½ and the average export price was $7.52½ per picul. This, I think, comes nearer being right. Gum copal arrives here in promiscuous conditions of purity or cleanliness; some of it is so full of foreign adhesions as to command only from $4 to $5 per picul, and from that up (at present) to about $11 for best. The margin is thus very great and the room for imposing and cheating in exports also. Our gum-copal importers can therefore not exercise too much care in their purchases, and my opinion is that it is best to buy it out here on commission in the uncleaned state from first-class firms only, and to have it cleaned at home.

As per declared exports in this consulate, the exports to the United States (which I will first quote and to other countries below the same) and, as per trade statistics, to countries in Europe were, viz:

Exported to—	1884.	1885.
United States	$93,621 00	$138,110 40
France	8,723 00	2,277 00
Germany	300 00	.....
Holland	11,000 00	.....
Italy	18 00	.....
The United Kingdom	50,377 00	54,427 00

The port trade statistics show the following gum-copal exports to the United States, viz, for 1884, $87,932; for 1885, $104,694.

The "discrepancies" between consular declared exports and port statistics can only be explained by the shippers in their reports to the export bureau.

GUM DAMMAR.

This is a tree gum also used in the fabrication of varnish, but dearer than gum copal. It is sent to this market from Borneo, the Malay peninsula (several provinces), Java, Celebes, Sumatra, other Malay islands, and Siam. The whiter, cleaner, and clearer it is (light amber), the more it fetches; though there is a flesh-colored kind which finds much favor. The difference in price between gum copal and dammar is nearly 50 per cent. in favor of the latter (*i. e.*, about $12 and $18). This gum is not at all scarce in the forests of Malaysia; to the contrary, quite abundant, and if the natives applied themselves more to gathering it than they do it would soon become cheaper. The demand for it in our country appears to amount to about one-quarter of that of gum copal, while in Europe, to judge from the port statistics, it exceeds it. The imports of gum dammar from all sources were, as per port statistics, as follows in 1884 and 1885, at this port, viz:

Years.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	8,094	$82,091	8,365	$88,937
1885	11,844	114,006	11,791	105,821
Total	20,538	196,097	20,156	194,758

Of this were exported, as per declared exports in this office, and as per port statistics, the following:

Exported to—	1884.	1885.
United States	$16,387 10	$25,082 01
Belgium	152 00	1,100 00
France	25,365 00	8,160 00
Holland	408 00	.....
Italy	3,416 00	.....
The United Kingdom	25,885 00	50,491 00

The port statistics show the following exports of the same article to the United States, viz: for 1884, $11,709; for 1885, $23,852. In this article, also, the shippers only can explain the above exposed differences between declared exports and port statistics.

GUTTA-PERCHA.

The demand for this, nowadays indispensable, article remained strong, and fortunately the supplies received appear to have been up to demand. How much longer this will be the case in this part of the world is now problematical. The gutta-percha and rubber trees have well-nigh disappeared from the forests near (*i. e.*, several miles) villages or settlements throughout the Indo-Malayan Archipelago, because the natives in gathering the milk have been cutting down the trees to get all there is in them, instead of judiciously tapping them. The supplies of gutta and rubber, therefore, are obtained from remote fastnesses of the jungles. Both the British and the Dutch Governments are doing all they can, not only to prevent the wholesale slaughter of these immensely useful trees that take such a long time to grow before they are vigorous enough to be tapped, but to replant or plant many in favorable locations. The chief supplies at this port are received from Borneo, Celebes, a number of islands in the Eastern and Southeastern Archipelago, the Malay peninsula (more from the east than the west coast, because less settled), Siam, and from Sumatra, which is the heaviest contributor, and sends a portion to Penang as well. Having described the methods observed by the natives for obtaining gutta and rubber and preparing them for the market, and how fraud and deception are resorted to by some of them by mixing stones, lead, iron, &c., in the paste, &c., in former reports, I will not repeat them beyond saying that great precaution is still needed in the purchase of them by exporters here, and that at the same time a great knowledge of the articles is required in classifying them as to quality and corresponding prices. Most of the gutta received at Penang is shipped to Singapore for local export, only a small portion being shipped thence to Europe, none to our country. As per port statistics, the imports of gutta-percha from all sources at Singapore amounted to, viz:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	53,911	$1,869,153	50,093	$2,029,402
1885	45,006	1,444,406	45,346	2,195,195
Total	98,917	3,313,559	95,439	4,224,597

This trade evidently paid the exporters, but more especially the Chinese and Arab middle trades, pretty well. Of the foregoing was exported—

Exported to—	1884.	1885.
United States	$26,857 47	$61,886 98
France	54,680 00	89,690 00
Germany	19,470 00	16,545 00
Holland		9,670 00
The United Kingdom	1,924,291 00	2,193,195 00
The United Kingdom from Penang	43,601 00	8,050 00

How much of the said gutta-percha exported to the United Kingdom was sold there and shipped thence to the United States I have no means of knowing, but I presume a good deal.

As per port statistics, the exports to United States amounted to, in 1884. $28,702, and in 1885 to $104,980. In this instance, too, the shippers only can explain the "wonderful discrepancies" "between declared exports" and port statistics.

RUBBER (INDIA AND BORNEO).

The colonial trade statistics make two classes, viz, "India rubber" and "Borneo rubber." If they made but one class and called it "Malay rubber" they would simplify matters and state the facts at the same time, because both classes are produced in and received from the same islands and districts in the Malay Archipelago and Malay peninsula as gutta-percha, only that the latter is taken from the gutta and the former from the caoutchouc tree, of which there are several species. I would hardly turn my head for the difference between any of them, the treatment of the milk in converting it into marketable rubber being far more important. The trade statistics show that "India" rubber is imported here from Borneo, and "Borneo" rubber from the Malay peninsula, sundry islands in the archipelago, and from Sumatra, while the cost of either is about the same. I therefore, on my own records and reports of declared exports, call it all "Borneo" rubber, because by far the most is imported and exported under that name, as I shall show below. The same remarks hold good in rubber as in gutta-percha regarding the future preparation and sale of the article.

As per port statistics, the following were the imports of rubber from all sources at Singapore, viz:

Year.	Articles.	Imported.		Exported.	
		Quantity.	Value.	Quantity.	Value.
		Piculs.		*Piculs.*	
1884	India rubber	842	$39,387	237	$11,050
1885	do	336	14,122	284	13,658
	Total	1,178	53,509	521	24,708
1884	Borneo rubber	8,450	331,728	2,035	356,004
1885	do	7,101	283,690	7,028	334,494
	Total	15,551	615,418	16,063	690,498

This is a strange showing indeed, that while 1,178 piculs of India rubber were imported in two years, only 521 piculs were exported; and that while only 15,531 piculs of Borneo rubber were imported, 16,063 piculs were exported. I am consequently inclined to think that the best part of the difference of imports over exports of India rubber, viz, 657 piculs, was probably exported and reported under the name of Borneo rubber, as that article shows an excess of 512 piculs in exports over imports. This, too, is an "item" that only the shippers can explain, though commercially I hardly think it made a material difference.

The following were the exports of rubber to the United States as per declared exports in this office: In 1884, $30,728.28, and in 1885, $45,559.30; total for both years, $76,287.58.

The port statistics report the following exports of rubber to the United States:

Articles.	1884.	1885.
India rubber	.....	$1,485
Borneo rubber	$15,680	10,532

which gives a total of $26,212 for Borneo, and a grand total for both kinds of $27,697 against $76,287.50 actual exports declared in this consulate, and therewith a difference and discrepancy (!) in favor of the latter of $48,590.50, which, also, can only be explained by the shippers through corrected reports to the port export office.

The port statistics show exports of India rubber and Borneo rubber separately to the following European countries, viz:

Whence and whither.	1884.	1885.
India rubber.		
From Singapore:		
French Cochin China (for France)	$2,110	.....
France (direct)	.....	$2,110
Germany	4,200	.....
The United Kingdom	4,700	10,063
	11,010	12,173
From Penang:		
France	1,390	.....
Germany	750	.....
Holland	400	.....
The United Kingdom	60,028	38,890
Total from the colony	73,578	51,063
Borneo rubber.		
From Singapore:		
Belgium	1,080	.....
France	96,100	103,805
Germany	1,080	.....
The United Kingdom	242,655	220,157
	340,915	323,962
From Penang:		
France	5,400	.....
The United Kingdom	18,907	7,769
Total from the colony	365,222	331,731

I have thus reported upon the most important articles of export (Straits produce) from this colony to the United States, and there remain the minor articles of export, such as gum benjamin, gamboge, sticklac, mother-of-pearl shells, dragon's blood, green snail shells, essential oils,

Malacca canes, &c., to be reported upon. My tables of exports, already forwarded to the Department, show, both in quantity and value, what business there was done in them as far as our country is concerned; and, fearing that this report will become too long, and having carefully reported about the same in former reports and in detail, I will dwell briefly on the same, making such remarks as seem to me most pertinent.

GUM BENJAMIN.

This is a tree gum received here chiefly from Sumatra and Siam proper and (not much) the Coromandel coast and the Philippine Islands. Its smoke being very aromatic, it is therefore chiefly used in sundry places of worship by Christians, Islamites, and Pagans alike, as incense, and many natives of Asia, who can afford it, burn it to give fragance in their dwelling-houses. As per port statistics, the following were the imports and exports at this port of said article, viz:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	7,312	$238,900	7,112	$235,638
1885	7,428	206,788	7,383	217,066
Total	14,740	440,688	14,495	452,704

Of this, exports to nearly all the countries in Europe, including the United Kingdom, which received by far the most, took place as follows, per trade statistics (to all), viz:

Year.	Exported from—	Quantity.	Value.
		Piculs.	
1884	Singapore	1,687	$110,921 00
1884	Penang	436	19,173 00
1885	Singapore	2,307	116,514 00
1885	Penang	1,228	55,005 00
	Total from the colony	5,658	302,513 00

During the said periods the United States received only about $15,000 worth from both Singapore and Penang direct, and I therefore presume that much more was sold in and shipped thereto from England.

GAMBOGE AND STICKLAC.

Both articles were shipped only in small quantities to the United States. By far the largest portion received here is exported to England, and it is from there, I presume, that supplies needed in our country are drawn. Why they are not imported direct from here, the original market of receipt and shipment, I cannot understand, both being useful and important articles.

They are essentially the products of Siam proper and Cambodia and Burmah. "Gamboge" is used in certain medicines, for dying purposes, and as a color in art painting; while "sticklac," a gum or wax deposited by certain small insects on and around the small branches of a certain tree, forming a crust evenly about one-fourth of an inch thick,

is a dye stuff. Gamboge exudes from a certain tree like gum or rosin. Of gamboge there was imported at this port, as per port statistics, as follows, viz:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	826	$35, 834 00	708	$38, 221 00
1885	315	18, 624 00	313	18, 658 00
Total	1, 141	54, 458 00	1, 021	56, 879 00

Of sticklac were imported, as per port statistics:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	4, 329	$52, 027 00	4, 240	$54, 460 00
1885	8, 717	92, 869 00	8, 167	88, 864 00
Total	13, 046	144, 896 00	12, 407	143, 324 00

While gamboge appears to be exclusively the product of Cambodia and Siam proper, *i. e.*, the Menam Valley (with tributaries), sticklac is nearly so. Small quantities received from Sumatra form the exception.

DRAGON'S BLOOD.

This very interesting article is the product of Sumatra, the province of Djambi, and also, but much less, of parts of the west coast of the Malay peninsula, north of Province Wellesley, under Siamese suzerainty. It is a dye-stuff, and may also serve as a paint in art painting. The article comes into the market prepared and put up in two different ways, viz, in cakes or lumps about 1½ inches thick, or in small tablets (plug-tobacco like), or sticks about 8 to 9 inches long (the thickness of an ordinary stick of licorice), both tablets and sticks being well wrapped or rather packed into palm leaves. Like most decoctions from leaves or woods it yields to heat (rosin-like), and palm-leaf wrapping prevents flowing. It is derived from a red flower, of which I only know the Malay name, viz, bunga-cosumba, and is the solid extract (the result of boiling down and evaporating) of said flower. It varies in price from $20 to $50 per picul, all depending on the purity of the article, since adulteration is resorted to, such as mixing brick dust or other foreign matter with the extract while still warm, before being poured into molds. I have before me four samples, at $20, $25, $40, and $50 per picul, respectively.

The first is cake, and nearly as heavy as its volume in brick. By scraping it, it feels gritty, and the scrapings, when mixed with water and dubbed over paper, give an uncertain dirty crimson color, while it should be a good crimson, with a light subtint of purple—a good claret color.

No. 2, looking like a thin plug of tobacco (about 1½ by 7 inches) and wrapped into palm leaf, is purer, more solid, but not free from adulteration.

No. 3 looks like a thin, long stick of licorice, and has a palm-leaf wrapper over all, with both ends closely tied and thread wrapped over all the entire length. It is very solid and said to be a special preparation by grinding up the extract with a little oil, which, it would seem, tends to give solidity when dry. Adulteration in this preparation would seem to me almost impossible, since by breaking a stick in two and holding a broken end to the light any admixture of any substance in the least rough and not exactly the same color as the true extract would show itself.

No. 4 (at $50) is in cake and looks different from all the rest (from the Malay peninsula). In color when broken it looks like dry blood with a purplish subtint. In rubbing it, it feels as smooth as wax and appears to be full of closely packed granulations or minute globules. Its volume is ever so much lighter than the same volume in No. 1, at $20; it is no doubt pure and genuine. Consequently there would be, in my opinion, economy in buying the last mentioned, *i. e.*, the dearest kind, being the best.

Dragon's blood is not always abundant in this market (the only one, I believe). At times it is cleared, and produce exporters, on receiving orders, find it at times difficult to fill them. What seems strange to me is that the said flower, being strictly indigenous, is not extensively planted and more of the article prepared. I think it would pay. As per port statistics, the imports and exports of this article were as follows, viz:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	340	$9,370 00	280	$9,567 00
1885	1,054	21,090 00	375	15,727 00
Total	1,394	30,460 00	655	25,294 00

The Chinese use this extensively, hence the great preponderance of imports over exports, besides what was held for speculation. Penang imported and exported some, about the one-fourth of the foregoing.

OILS.

Essential oils (extracted from lemon grass, patchouli, nutmegs, and aromatic leaves and flowers of any kind) form a fairly important article of export from this port. At present there are but two laboratories for the distillation of this article. The distillers are also the planters of the aromatic leaves, among which lemon grass holds a prominent place, and their products, from all I can gather, have a good reputation, and our country receives a goodly proportion of the same. There are factories of essential oils also in Ceylon and other parts of India, and I presume competition in their products is pretty close. As per trade statistics, the exports of essential oils of all sorts, quantities not stated (it is sold at so much per ounce), amounted in 1884 to $15,187 and in

1885 to $11,706. It is my opinion that these amounts are not correct, that much more was both manufactured and exported, but probably not reported to the export office. There is such an abundance of a variety of aromatic leaves, flowers, roots, barks, and woods hereabout and in all Malaysia that it surprises me that it is not more availed of and this kind of fabrication extended.

CANES AND STICKS.

Malacca canes, a species of rattan thicker, shorter jointed, and smoother than the usual rattan, are not mentioned in the port statistics under that name, but are coupled with "sticks," *i. e.*, "canes and sticks," and therefore the exact amount of exports and imports of either cannot be given, notwithstanding that the trade is of some importance. The Malacca canes make about as handsome, tough, and durable a walking cane as I can think of, and the thin ones answer well for carriage-whip handles. This kind of cane is not nearly as plenty as the rattan, and is only found in certain localities far in the interior of dense jungles, generally near the base or on the lower declivities of mountains. They are received here mostly from the Malay peninsula, Sumatra, and Southern Borneo. The port statistics quote the following imports and exports of "canes and sticks":

Year.	Imported.	Exported.
	Value.	*Value.*
1884	$83,889	$61,470
1885	63,462	47,610
Total	147,351	109,080

This shows a falling off in the receipts of said articles and that a large portion remains here. Foreigners visiting this port buy large numbers thereof to take home with them. It is interesting to note in the statistics that during said two years Germany and Great Britain received more "canes and sticks" than all the other countries to which exported.

SEA-SHELLS.

For receiving and shipping sea-shells of great variety in colors, forms, and sizes, Singapore is very important, and a great many kinds of shells, which, during the first few years of my residence here, were only bought by travelers, naturalists, and collectors of curios, at nominal low rates, are now eagerly sought and bought by agents and firms for shipment to Europe and our country, where they are used in the manufacture of a variety of articles, especially in the fancy line of goods. They are received here from all parts of the Indo-Malayan Archipelago, coast of Siam, Burmah, and China. I divide them, as in the commerce of the port, into three classes, viz: (1) mother-of-pearl shells, (2) assorted shells, (3) green-snail shells, though the latter is a land and not a sea shell.

Mother-of-pearl shells are almost entirely received here from Borneo, the Suloo Islands, and the Southeastern Archipelago, including the Moluccas. As the receipts are slowly falling off at this port, I presume that, as is the case with other products from that part of the Archipelago, they are also largely received at the ports of Macassar and Batavia

and thence exported; but it may also be assumed that the fisheries do not yield as well any longer as they used to, and the article is steadily increasing in value. The port statistics show the following imports and exports in 1884 and 1885:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	3,110	$108,928 00	3,032	$123,554 00
1885	2,708	130,872 00	2,459	104,538 00
Total	5,818	239,800 00	5,491	228,092 00

By far the largest portion of the foregoing was exported to the United Kingdom.

Assorted sea-shells, or "shells of sorts," are neither imported nor exported by weight, but in almost any way one can buy them from the natives. Much depends on a good, middling, or poor assortment, too many of one and not enough of another kind, more or less marketable or common, whether clean, bright, &c. There is much guess-work as to quantity in buying them, as they are nearly always bought by the boat-load or basket, or in case of rarer ones, by the 100 or 1,000, if counted into assortments. And in exporting them they are nearly always invoiced per assortment, at so much per 1,000. Certain sorts are in very great demand and command good prices. As per port statistics, the imports and exports thereof were as follows in 1884 and 1885, viz:

Year.	Value of imports.	Value of exports.
1884	$41,756	$28,641
1885	12,849	13,916
Total	54,605	42,557

The difference in imports over exports may safely be accounted for as sold to local collectors (travelers, naturalists, curio hunters, &c.). In this instance France received by far the largest proportion of that exported; the United Kingdom only a few hundred dollars' worth.

Green-snail shells are a "land shell" strictly, of short, spiral form, about 1 inch long and of about five-eighths or three-fourths inch diameter in the thickest part. In color it is a pale-green lemon color, suffused with yellow, very pretty to behold. It is common pretty much throughout Malaysia, but the Mergui Islands, on the west coast of Tenasserim, contributed a large proportion of those exported—nearly one-third. During the first few years of my residence here, these shells, beyond purchases by naturalists and curio hunters, did not enter into commerce at all. Gradually, however, they found their way into commerce for export, to be made into small buttons for kid gloves, as I have been informed. They are exported almost exclusively to Austria, France, the United Kingdom, and our country. As per trade statistics, the imports and exports of green-snail shells in 1884 and 1885 were as follows:

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	Piculs.		*Piculs.*	
1884	3,167	$22,397	3,242	$32,263
1885	3,573	29,142	3,473	30,975
Total	6,740	51,539	6,715	63,238

The quantity exported appearing greater than that imported, I presume that quantities were received from native packers without being reported at the port import office, which occurs in this port often enough, there being no custom-house and no duty on imports or exports. Besides, plenty of such shells could be gathered by natives on this very island, where they are to be met with in nearly every garden having shrubs and trees (it is a tree shell), and many other kinds, among which some of them very handsome. Penang being nearest to the Mergui Islands, Tenasserim, and Burmah, imported and exported about one-half of the quantities above shown.

I have thus reported on the most important articles of "Straits produce" exported from this port and the colony of the Straits Settlements, with the experience a long residence has given me and with such figures and facts as were attainable. For brevity's sake I have left out the minor, less interesting or important articles which now and then are shipped to the United States. In a future report I may allude to them and sundry other interesting subjects connected with or related to the trade and enterprise of this colony.

There is much that is interesting here, but cannot be satisfactorily given in short, condensed reports, however useful they might prove to American trade and enterprise and generally instructive to the public. But standing greatly in want of increased clerical assistance in consequence of steadily increasing business and work in this consulate, I find no time for writing reports and compiling statistics, except now and then when current business and routine work is not so pressing, which does not occur often at all. I ask consideration, too, in view of the fact that this is a trying, extreme tropical, and, at times, insidious climate, and that one, let him live ever so carefully, is apt to suffer now and then from the effects of it, combined with unremitting work day after day.

A. G. STUDER,
Consul.

UNITED STATES CONSULATE,
Singapore, March 25, 1887.

TURKEY.

SYRIA.

Annual report of Consul Bissinger.

AGRICULTURE.

The agricultural condition of Syria, officially known as the vilayet of Syria, for the period under review—July 1, 1885, to June 30, 1886—has not been, on the whole, very satisfactory. In many districts one or more of the crops, such as silk, wheat, olive, orange, grapes, &c., have failed. The exact area under cultivation it is difficult to ascertain, but is comparatively limited, owing to the extreme indolence of the natives. The great hindrances to agricultural progress are the sparseness of the population, want of roads, and want of capital; but above all, the oppressive taxes form the greatest of all the obstacles. The Department has already been made aware of the unjust distribution and collection of the "Takhmiss" tax, which proved so oppressive to the interests of both the land proprietor and to the farmer. Many a fellah, not being able to pay this tax of 5 per cent. of the assessed value of the land tilled, irrespective of good or bad crops, was obliged to sell his property in order to avoid being prosecuted by the Government's officials.

The complaints of this suffering class of its subjects having been repeatedly brought before the Sublime Porte, orders were recently sent to the high functionaries of this province to abolish the "Takhmiss" tax, and to revert to the old system of "tithes" taxation, by which method the farmer yields to the Government one-tenth of the actual produce of his land, to which a "surtax" of two per hundred has now been added. The tax collected by the Government under the "Takhmiss" system during the past year amounted, in Syria, to $1,014,076. The farmer had scarcely had time to enjoy the remission of this onerous "Takhmiss" tax before the Greek question arose and compelled the Imperial Government to call under arms thousands of the peasantry who were peacefully following their pursuits, thus totally abandoning large tracts of land, which might otherwise have yielded abundant crops.

Up to the present time very few modern agricultural implements have been introduced into this country. All the operations of husbandry are yet performed in the most primitive manner, and tilling is still done by the antediluvian wooden plows, which are usually roughly shod with iron, as the people are generally too poor to cultivate the land in an economical manner by the aid of machinery; but it is not only his poverty that deters the native plowman from exchanging his rude implements for the more modern ones of the Western nations, but also the total absence of good mechanics in the interior who could undertake the necessary repairs in an emergency. While it is quite true that, generally speaking, the fellaheen are not in affluent circumstances, there are also those who are well to do, and even large estates belonging to wealthy owners are to be met with, which would be considered model farms in any country; but these form the exceptions.

The large estates are usually worked, as in the southern countries of Europe, by the farmer on the share or profit system, the proprietor giving the use of the land, furnishing seed, oxen, &c., and paying the ex-

penses of reaping, as well as the "tithes" tax, taking for his share of the profit three-fourths of the produce; in the more sparsely settled parts of the country a system of leasing the land prevails; but the fellaheen prefer the "share," or "profit," system, as by it no capital is required. American reapers have found their way in limited numbers into the plains of Mesopotamia, and are, I am credibly informed, working splendidly near Harran, the ancient home of Abraham.

Improved American farming implements, neither too expensive nor too complicated, would find a limited market in Syria, and their superiority over the primitive native tools of the country would soon be recognized and open up the field for a remunerative trade to us. The French have recently introduced some of their farming implements, such as plows, reapers, and a sort of corn mill, in the plains of the Bekaâ, but I have not learned that their efforts have been crowned with success; at least it has not induced the native farmer to exchange his ancient tools for the modern French machinery, to any appreciable extent.

A German-American mechanic, established in business here, has just returned from Homs and Hama, where he went in the interest of a German commercial association, whose representative is now visiting Syria with a view to introduce all kinds of German agricultural machinery and selecting suitable local agents for their sale; he put up a German thrashing machine, made after an American system, and fully shares my belief that improved, low priced American farming implements of a simple construction, not too heavy, or too easily put out of repair, could be profitably marketed here. The Germans are at present making great efforts to extend their commercial and industrial relations with Syria, by forming so-called trade associations, whose agents visit the principal commercial centers of Syria, such as Beirut, Damascus, and Aleppo, exhibiting samples of the various branches of trades they represent and appointing everywhere local agents to solicit and to receive orders. This method of the German manufacturers and merchants in reaching a foreign market, which involves comparatively little capital, seems to me at once efficient and inexpensive, and is well worthy of the earnest consideration of those of our manufacturers at home who are desirous of sharing in the commercial advantages of this new and continually growing market.

The *wheat* crop in the Syrian plains has been a middling one only, owing to the insufficient rainfall during last winter, while the Aleppo district yielded a most abundant harvest. The export of this cereal to Europe from this country is decreasing from year to year. The cost of moving the crops from the interior to the sea-port is the greatest obstacle to the material progress of the country and the main impediment to exportation. All modern modes of transportation are lacking, the camel being the only means by which the transit is accomplished. It is related that out of three bushels of wheat carried from the interior towns in the Hauran to the seaboard, the camel will consume one, the camel driver will claim another as his pay, leaving but one out of three available for the market; this may be, and probably is, an exaggeration, but it tends to show, in a most characteristic manner, the excessive cost of bringing produce to the market.

Wheat is a prime article of food in Syria and is more extensively grown than any other cereal; considerable care and attention is therefore bestowed upon its cultivation. The best wheat grows near Damascus, in the Hauran, the Bekaâ plain, in the district of Merj Uyoun near Sidon, in the littoral of Haifa and Acca, and in the country lying to the east of Latakia. The principal ports of exportation are Acca, Haifa,

Latakia, and Tripoli. All the wheat consumed in the city of Beirut and the surrounding regions is brought from the interior or from towns along the Syrian coast. Its present market price ranges from $1.22 to $1.55 per keiley, equal to 60 pounds, according to quality.

In many parts of the country where the fellaheen are very poor, bankers and wealthy merchants make pecuniary advances to the farmers at rates of interest varying from 10 to 15 per cent. and sometimes even more. At harvest time, and before the crop can be removed, the inexorable tax gatherer collects the "tithes" tax, *i. e.*, he takes the tenth part of the entire crop grown; then the banker receives as his share, in wheat, the amount of his claim, with interest, not, however, at the prevailing market rate, but at a price previously agreed upon, which is generally below the market, and consequently detrimental to the unfortunate farmer.

It is impossible to ascertain the exact quantity of this commodity raised in Syria, and the figures, even if accessible, would be too unreliable to be of any service in this report.

Barley is grown where wheat is raised in this part of Turkey, but in much smaller quantities, and is almost wholly consumed at home, a very small percentage only being exported to Algiers and Tripoli (of Barbary), and sometimes to England, where it is made into malt. The price of barley during the year varied from 53 to 61 cents per keiley (60 pounds).

Sesame, an annual herbaceous plant, from the seeds of which oil is expressed, is cultivated principally in the plains of Hama and Homs, in the Hauran, the littoral of Latakia, and Sidon and in the Bekaâ. Its ports of exports are Haifa, Acca, and Latakia. It is packed in sacks of 60 to 70 okes (170 to 200 pounds), and shipped to Marseilles and Genoa in considerable quantities. The best sesame comes from Southern Syria, the Latakia district producing an inferior quality.

Corn is grown in some parts of Syria, but in much smaller quantities than wheat, and is consequently of minor commercial importance.

Oats are almost wholly unknown here.

Cotton is planted more or less throughout Syria, but not in sufficient quantities to affect the markets of the world; its inferiority, farther deteriorated by the little attention bestowed upon its cultivation and cleaning prevents it from becoming an important article of export. From 1862 to 1864 the sudden rise in price brought large tracts of land under cultivation, and during that period cotton was the most important item on the export list, but this has long since ceased to be the case and the present quantity that leaves the country is very insignificant indeed.

Cotton will probably never thoroughly thrive in Syria, at least not under present conditions. The inferior staple needs improvement by the introduction of exotic seed; but this has its difficulties. American seed is not suited, owing to the want of proper irrigation, which the nature of the country and the poverty of the fellah cannot overcome, and the Egyptian is subject to the vicissitudes of the climate and requires extra care and attention; the planters, therefore, prefer the smaller but surer returns from the indigenous seed, which needs much less care.

Silk.—The silk crop of last year can scarcely be called an average one, the total number of cocoons amounting to only about 2,000,000 okes, equal to 5,600,000 pounds.

The eggs now used here come principally from Corsica, and Arc, in the department of Var, in France, and all those that were not minutely examined by the aid of the microscope, either here or in France, and found free from disease, proved utterly worthless. Then, too, the sud-

den change in the weather during the month of May, and at the most critical period, did much damage to the silkworm.

The disease of the native cocoon of Syria first showed itself in 1851, and has since caused its almost total destruction. It is alike remarkable for its great size and the superior quality of its yield; but all remedies proved useless, and recourse was had to Cyprian, Candian, Egyptian, and Japanese seeds in turn.

In the vilayet of Syria, outside of the Lebanon, the Beirut and Tripoli districts, and the regions of Hasbeya, Rasheya, and Baâlbeck, in the Damascus district, are the principal points of silk culture, of which Beirut is its great commercial center. Thousands of the peasantry find profitable employment in the rearing of the silkworm, as comparatively little care is needed in its cultivation. The cocoons are sold to the numerous silk factories, where girls from nine to eighteen years of age are employed in the various manipulations of spinning and reeling; boys and men are less frequently met with in these establishments, for girls show more patience and application and evince greater skill.

Since 1838 much progress has been made in the method of reeling, the native system preventing, up to that time, any considerable quantity being exported to Europe, the surplus crop going chiefly to Egypt, Morocco, Bagdad, and various parts of Turkey.

The improvements made are due to a French gentleman, who, in 1840, established a silk factory on the French system on Mount Lebanon, and since then France has become a large consumer of the native raw silk, commercially known under the appellation of "grège." It is also exported in limited quantities to Egypt, Cyprus, and Candia.

As America has made gigantic and rapid strides in the manufacture of all kinds of silk stuffs, laces, &c., it is a matter of some surprise that no attempt has yet been made to import the native raw silk direct from Syria instead of through Marseilles and Lyons. There are reputable houses here in Beirut engaged in silk culture whose commercial integrity and responsibility is beyond question, and who have repeatedly assured me that they are not only ready, but very anxious to enter into direct commercial relations with the manufacturers of the United States; they have watched with keen interest the unprecedented industrial progress that has been made in the United States within the past few years, and naturally covet a greater share of its trade.

It should not be, it seems to me, very difficult for our silk manufacturers at home to understand that the commissions now paid to Marseilles and Lyons houses, through whose agency the Syrian silk now reaches the United States, could, by direct relations with the Syrian silk-growers, be saved to them; and of the feasibility of direct intercourse between Syria and the United States there can be no question, for it was practically demonstrated in 1884 by direct importation of Persian raw silk from Teheran by a manufacturer of Paterson, N. J. There is frequent and direct steam communication between Beirut and Liverpool, and freight rates are very low, and I am fully persuaded that but a single venture would result in active and profitable direct intercourse between the American silk manufacturer and the Syrian raw-silk producer.

Wine is grown throughout the greater part of the vilayet of Syria and the Lebanon. The vineyards having been, to a certain extent, free from the destroying effects of the diseases to which they are often subject, yielded a very fair crop. The phylloxera, first discovered in 1863 in Villeneuve-les-Avignon by a Mr. Renaman, that ravaged fifty-four departments in France in 1885 and fifty-three in 1884, and inflicted untold

damage to viticulture in the provinces of Malaga, Granada, Almeira, and Murcia, in Spain, not to mention other countries, has not, so far as I am aware, invaded this part of the globe of late.

Grapes are consumed fresh in large quantities; they are also used in preparing a sort of marmalade called "Debs," for home consumption, and dried to raisins. Large quantities of raisins were exported to France and Egypt during the year. Prime quality is now worth from $22 to $25 per kantar of about 570 pounds. A French wine press has been established at Shtora, in the plains of the Anti-Lebanon, and is producing a very good and wholesome white wine, which finds a ready market in this country and Egypt. It is generally sold in the ordinary wine-bottles at an average wholesale price of about 6 cents per bottle. When two or three years old it is said to rival the best Burgundy. There are many other kinds of white, red, sweet, tart, and mild wines made in this country; but the best is produced in the Lebanon. For the last few years small quantities of the Lebanon wine have been exported to England and France, where they were favorably received on account of their entire freedom from all foreign ingredients.

Licorice root.—The licorice-root crops have become a source of immense revenue to the inhabitants of some parts of Mesopotamia and the country to the north of Damascus. The American firms engaged in this business have established hydraulic presses in the principal ports of exportation, such as Beirut, Tripoli, Alexandretta, and Suedieh, for pressing the root into large bales prior to shipping it to the United States. This article, which was formerly exported to Egypt only in small quantities and used in the preparation of a refreshing beverage during the summer season, and put to a similar use in Damascus and other Syrian towns, is now attracting the earnest attention of many native merchants, owing to its increased demand from the United States, and prices have consequently materially risen. The total quantity of licorice root exported to the United States during the year amounted to about 7,660,341 pounds, valued at $131,831.

Oranges and lemons.—For the last few years the orange and lemon trees have been subjected to a disease, the exact nature of which up to this time it has been impossible to ascertain, seriously affecting the quantity of the fruit, but without any perceptible deleterious effects to quality. Hundreds of trees have withered and died during the year. The export trade in oranges and lemons of this country is still conducted on a comparatively large scale. About 26,000 boxes of lemons and 10,000 boxes of oranges, each box containing 300, are annually shipped from Beirut, Sidon, and Tripoli to Russia, England, and Austria. Lemons and oranges are rolled in thin (tissue) paper and placed in wooden boxes when prepared for exportation. They are generally plucked when only half ripe and even when yet quite green, to prevent their decaying while in transit. The average wholesale price is 32 cents per hundred.

Olives.—The olive yield in the Beirut district was less than an average one, and the price of oil was comparatively high; but in the Damascus district the crops were quite satisfactory. Olives are universally used by the poor and even the middle classes in Syria as an article of diet. Those grown around Damascus are large and green but not very juicy, while the Shwayfat groves (near Beirut) produce a small and generally black fruit which is very rich in oil. The price of the latter varies between 6 and 8 cents per oke of $2\frac{4}{5}$ pounds. The Shwayfat groves, which cover a large area of land along the sea-shore to the south of Beirut, produce an annual yield of 1,650,000 pounds of olives, valued at about

$60,000. The oil obtained from this species is good, and if refined (for which process no modern appliances exist in this country) would prove the best in the world for table use. Limited quantities of it are exported every year to Europe. The present market price of sweet oil is from 48 to 50 cents per bottle of 5⅓ pounds; inferior or second quality oil is worth from 40 to 42 cents.

Tobacco.—The tobacco plantations of last year have yielded the usual average crop. This article is cultivated in the districts of Sidon, Mount Lebanon, Tripoli, and Latakia. Mount Lebanon and Latakia rank first as to quality, Sidon and Tripoli coming next. The Latakia tobacco is called *Aboo-riha* ("Father of scent"), and is largely exported, notably to Egypt and England, and in smaller quantities also to the United States. It is dark in color, owing to its being fumigated by the Nusairiyeh, dwellers of the mountains within whose district it is wholly grown, by the smoke of the "elezzer" tree, which imparts to it a very aromatic flavor, highly esteemed in Egypt.

The districts of Upper and Lower Koura, in the Lebanon, produce a fine quality of tobacco, but that known under the name of *Djebeili* is superior to any grown in the mountains; it is much sought after by reason of its agreeable aroma, and has the advantage of not leaving the disagreeable after-taste, as, for instance, the Macedonian tobacco. It is not exported, but only grown in sufficient quantities for home consumption.

Tobacco in Turkey is a state monopoly, farmed out for certain considerations and under certain restrictions to an association composed of a syndicate, at the head of which are *Die Oesterreichische Credit-Anstalt* at Vienna, Mr. S. Bleichroeder, the opulent banker at Berlin, and *La Banque Impériale Ottomane* at Constantinople.

This association is known as the "*Tobacco Régie*," with its seat at Constantinople, and is subject to the Ottoman laws. It has agencies throughout the entire extent of the Turkish Empire, wherever there may be any need of them, for the sale of tobacco to dealers.

Tobacco growers are obliged to obtain their authorization from this *régie*, simply stating location and extent of land which they intend to place under cultivation. By the 1st of August in each year the previous crop must be transported to the warehouses, which the régie provides for this purpose. No tobacco can be sold by the planter for interior consumption, but he may export it subject to certain restrictions.

The "Lebanon" territory is not embraced in this monopoly, and its inhabitants are entirely free agents in the cultivation of the weed.

GENERAL REMARKS.

Many of the causes that have almost totally destroyed the crops of the country might have been avoided, in part at least, if the fellaheen had any practical knowledge of agricultural science, by which they could remedy the many evils that now and then beset the trees, plants, &c.

Most of the farmers are ignorant even of the proper use of the several kinds of fertilizing substances, and everything pertaining to agriculture is still carried on in the most primitive manner.

The produce of rich, vast plains, such as those of Hama, Hauran, and the Bekaâ, little more than suffice for the support of the scanty population. Large tracts of great fertility lie waste and depopulated, but still present traces of former prosperity.

By reason of its varied climate, from the almost tropical temperature of the coast line to the temperate zone of table lands, Syria is admirably

adapted for the cultivation of most of the products of the earth, but oppressive taxation, illegal exactions of all those who possess any authority over him, to say nothing of the usurer, from whose clutches he is seldom free, combine to prevent the native farmer from reaping anything beyond a miserable pittance from his toil. Add to this bad harvests, and the lot of the Syrian "fellah" is indeed not to be envied.

ANIMAL RAW PRODUCTS.

A vast area of the Syrian territory is used for grazing purposes by Bedouins (nomadic tribes), who live from the products of their numerous herds. Trade in cattle and animal products is therefore quite important. Then, too, the export of cattle, principally to Egypt, is worth noticing.

Hides are tanned in Beirut and vicinity, as well as in Damascus and in the Lebanon. In other parts of Syria the calf is not slaughtered, but used as a draft animal. The market price of fresh hides is from 28 to 35 cents per oke (2¾ pounds). Goat and kid skins are worth from 12 to 60 cents, according to size and quality. Kid, lamb, sheep, and goat skins are brought from Hama, Homs, Damascus, and the Hauran, to Beirut; they are partly dried in the air, or salted; in the latter case they are from 40 to 60 cents cheaper per dozen. The majority of the hides coming into Beirut and all of those that are tanned here are shipped to France; they are generally put up in bundles of 20 to 25 each.

Wool in Syria forms, after silk, one of the most important articles of export. Immense flocks of sheep are raised by the Bedouin and Curd tribes along the eastern borders of the vilayet of Syria and Palestine, the large pasturage grounds of which offer peculiar advantages. The total wool clip in Syria is estimated at about 8,500,000 pounds, the greater part of which (fully three-fourths) goes to the United States, Italy and France taking the rest. It is of an inferior quality, but graded here "superior" and "ordinary." The former is sold at Aleppo, Hama, and Homs, where the pastures are most favorable to the flocks. The Damascus wool is of the ordinary quality, although in point of fact the difference between this and what is inappropriately termed "superior" is very slight. The principal Syrian wool markets are Aleppo, Damascus, Homs, Hama, and Tripoli. The product of the innumerable flocks grazing in the southern part of the Hauran and the regions adjoining the Jordan is transported to Acca, from whence it is exported to the United States. Beirut, Tripoli, and Alexandretta are the other ports of exportation. Wool exported to the United States is almost entirely, if not wholly, sent in an unwashed state, in order that it may enter under the category subject to duty of only 2½ cents per pound. The sheep are shorn in the beginning of May, and soon after the clip the wool is brought in sacks to the principal markets to be sold, mainly to dealers that had previously contracted for it at certain fixed prices, from which, however, they usually claim a reduction of from 2 to 3 per cent., according to its cleanness. The price of unwashed wool during the early part of spring rose from 10 to 20 per cent.; but has since then lost some of its advance again, and is now quoted at $42 to $46 per kantar of 570 pounds, while washed wool commands from $57 to $86 per kantar, the difference being wholly due to quality and the degree of its cleanness. Women can be engaged at from 8 or 10 cents per day to free the wool from all foreign matter. The washing process necessitates an outlay of from $2.70 to $3 per kantar (570 pounds), and is subject to an average loss of about 35 to 40 per cent. in bulk for the ordinary, while wool of a lower order generally loses fully one-half; this loss varies according to the greater or lesser amount of rainfall just prior to the clip. Transactions in wool are invariably in cash.

MANUFACTURES.

Silk stuffs.—In Syria weaving of silk is as old as the cultivation of the raw article itself. The brilliant period, however, which this industry once so justly enjoyed in both Europe, Asia, and Africa is long since gone and past. The silk weavers of the present day work principally for domestic consumption, although the late improvements in both design and finish have again attracted the attention of Europe, and even the United States, towards the ancient home of silk culture; and Egypt and other provinces of the Turkish Empire are still large importers of this industry.

Some of the Damascus weavers have lately imitated and introduced into their silk and cotton stuffs the odd designs on the Persian carpets, and these patterns, it appears, have become very popular. The art of weaving gold and silver threads in the native silk stuffs has reached a high degree of perfection, notwithstanding that all the work is done on hand looms of a most remote period.

But the native manufacturers of silk, cotton, and woolen stuffs have much to contend with from foreign competition, which makes itself severely felt; and markets that were formerly controlled by Syrians are now disputed by European manufacturers, who, with their skilled artisans and with the aid of improved machinery, find competition with the older methods comparatively easy.

The greatest specialty in the native silk stuffs, and in which Syria undoubtedly excels, is that in which cotton forms the warp and in which the greater or lesser quantity of silk in the weft determines the quality. Cotton and woolen stuffs are also manufactured from goats' and camels' hair, worked with silk and wool.

Most of the native stuffs are in striped patterns; and of the innumerable articles manufactured in Beirut, Damascus, Aleppo, Zuke, Deir-el-Kamar, Homs, Hama, &c., the following will tend to illustrate the extent of this industry:

Kaffiehs are all silk and half-silk stuffs, often with gold or silver threads woven in, and are used as head-dresses in summer and worn around the neck in the winter. They cost from $1 to $4, and over. Beirut, Damascus, Aleppo, Homs, and Hama manufacture them largely. They are also made wholly of cotton.

Belts are made of all silk, with gold and silver threads, silk and cotton, and cotton only, in striped and square patterns, and are largely exported to Egypt, Anatolia, Greece, and Constantinople. Beirut, Damascus, Aleppo, and Deir-el-Kamar are some of the places where they are made.

Abayas (or Syrian cloaks) are extensively manufactured in Damascus, Beirut, and Aleppo, in all silk, silk and cotton mixed, silk warp and silk and gold or silver woof. They vary in price from $2 to $50 apiece, and are made almost wholly for domestic consumption, and rarely go abroad except when taken by tourists.

Tobacco-pouches are made in Zuke (Mount Lebanon), of all silk, silk and gold, and silk and cotton. They cost from 20 cents to $1.50, according to quality. Many remain in the country, but by far the greater part are exported.

Slippers form one of the specialties of the Zuke work. They range from 50 cents to $3 in price, and can be bought in all silk, half silk, and woven with gold or silver threads.

Pillow-cases are also made in Zuke, and generally cost from $1 to $3, but some of the more elegant ones are worth $6 and more. They are made of the same material as all the Zuke work, *i. e.*, all silk, silk and cotton mixed with gold or silver threads, and all cotton,

Sharpa scarfs are almost wholly exported, and made of all silk and gold threads, and silk and cotton, and cotton only. Cost $1.50 to $10.

Curtains in very handsome designs are woven in silk, silk and cotton mixed, all cotton, and all wool. They are made in many colors, red, blue, maroon, &c., and all have either gold or silver threads running through them (forming part of the woof), with a decidedly pretty effect. They cost from $4 a pair upwards.

Surrati or *Aldja*, all silk and cotton and silk stuffs for dress goods for both ladies and gentlemen. These stuffs cost from 30 cents to $1.30 a yard, and are often made after Indian patterns. They are in stripes of various colors, red, white, green, black, and blue, and are largely manufactured in Beirut, Damascus, Aleppo, Homs, and Hama. They are universally used throughout the Ottoman Empire, including Egypt, and have found some favor in Europe.

Kutni.—Silk stuffs for upholstery, of cotton and silk mixed, are made in Beirut, Damascus, and Aleppo in a large variety of patterns, some of which are very pretty and tasty. They are being exported to Europe, and indirectly to the United States, and are destined to become very popular in all countries. The price per yard ranges from about 50 cents to $1.25. There can be no doubt that if these stuffs were better known in the United States a ready and remunerative trade could soon be developed in them; for with beauty and cheapness they combine the rare quality of being durable, merits of which our merchants are usually not slow to avail themselves, and the fact that the tradesmen of Europe have only so far fully recognized these advantages is wholly attributable to the geographical positions of the two countries and to their greater familiarity with the Syrian industries. Samples and a price list of the many different patterns and qualities of these stuffs could easily be obtained and forwarded to our markets, and the manufacturers here are not only ready and willing, but most desirous to introduce these specialties into the United States, a country to which they are eagerly looking for more reciprocal trade relations.

Carpets are still manufactured in the northern parts of Syria, notably Karamania, exclusively by women. They are wholly made by hand, and generally small in size, due to the small rooms in which they are made. The predominating colors are red and black combined. In point of beauty and design, distribution of colors, and durability, they are inferior to those made in Anatolia and Persia. They cost from $4 to $18, according to size and quality.

Felt.—There are at Damascus and Zahleh a few felt factories, the material of which is a mixture of old cotton and camels' hair. It is mainly used for upholstering saddles and for packing valuable goods.

A small boat propelled by steam (the very first one ever built in this part of Turkey) was completed in May last, in the construction of which some of the Turkish seamen at this port assisted, and this achievement was considered a marvel of progress by the natives here.

Of the other industries of Syria, such as the paper-mill of Beirut, the manufacture of cotton yarns in Damascus, and of an inferior quality of glass made in the interior, little worthy of general interest could be said, and the gold and silver filigree, and mother-of-pearl work, inlaid tables, chased copper and brass ware, and many other articles of minor importance are of no real value to the commerce of the world, excepting possibly

Soap, made out of olive oil, of which a very fine quality is manufactured by the American colonists at Haifa and shipped, in moderate quantities, to the United States. Besides Haifa, a large number of

small establishments for the manufacture of toilet soap exist also in Beirut, Damascus, Tripoli, &c.

MINES.

The mining interests of the country are totally neglected. No exploration is being made of the iron, coal, lead, copper, or silver mines existing in the land. The bitumen mines in the Hasbeya district, which proved such a source of wealth to many Syrians during the last ten or fifteen years, have been abandoned, the contract with the Turkish Government having expired and the immediate supply being apparently exhausted. Only 110,000 pounds of bitumen were produced by a mine situated in the Bekaâ plain and exported to England, but none went to the United States during the year ending June 30, 1886, while in the previous year 226,187 pounds of mineral pitch, valued at $6,046, were declared here for export to America.

Chromium.—A mine in the Latakia district producing chrome or chromium has recently been opened up, of which small quantities have been shipped, as an experimental venture, to both England and the United States; its cost is from $15 to $20 per ton. Aside from this mine, it is also met with in the districts adjoining—Antioch, Suedieh, Alexandretta, and El Baseat, on the Syrian coast.

Scientifically, chromium (chrome) is so called from the many colored compounds it produces; it was first discovered in 1797 by a Mr. Vanquelin, and occurs naturally as the chromate of lead and the chromate of iron. Its principal compound is bichromate of potash, obtained by beating chrome iron ore in powder with one-fourth of its weight of niter and then digesting in water, which dissolves out the chromate of potash, a yellow salt, and when this is acted upon by sulphuric acid, it is converted into bichromate of potash, readily crystallizes in orange-red crystals, which is soluble in water, and is largely used by the dyer and calico printer.

If this salt be added to a solution of lead, an abundant yellow precipitate occurs of chromate of lead, or chrome yellow, which is used largely by the painter as a yellow pigment.

A sesquioxide of chromium, chrome green, possessing a bright green color, is rendered useful in enamel painting, and, being innocuous, it is also introduced into paper hangings instead of the highly dangerous arsenical green pigment, and the bichromate of potash is employed in conjunction with the sulphuric acid as an agent in bleaching palm oil and other oils and fat. Chromium is also used to give a fine, dark green color to the enamel of porcelain, to glass, &c.; and this hard, brittle metal of a grayish deep color, so difficult of fusion, is therefore well worthy of being brought to the notice of those of our industrial establishments in which its manifold properties might be practically utilized.

FISHERIES.

Roach, mullet, tunny, pilchards, and sole are the principal kinds of fish caught in the Beirut waters. Most of the large rivers throughout this country abound in the finny tribes, and carp is fished in immense quantities in the waters of the Orontes or Aâssi River.

Fish may be almost called a luxury in this market on account of the heavy tax of 20 per cent. imposed upon it by the municipality.

Sponges.—Sponge fishing extends all along the coast of Batroon, Tripoli, Latakia, and the island of Ruad, north of Tripoli. It is not con

fined only to native fishermen, for many Greeks come over from Kalimno, Stanchio, Rhodes, and Samos, in their little crafts, to share this traffic with the Syrians.

The fishing boats are generally from 18 to 20 feet long and have 4 or 5 people to man them. The catch commences in June and extends to October, this season being the most suitable owing to the calmness of the sea. The boats remain out to sea only from sunrise to sunset and the divers are mostly young and middle-aged men; old men are less adapted for this work, which is very hazardous and requires much strength. The time the diver generally remains at the bottom of the sea is from sixty to eighty seconds, unlike the Australian pearl-shell fishers, who often remain under water for hours at a time. This is in a great measure due to the difference in their respective outfits, for the native Syrian diver has simply an open net around his otherwise wholly unprotected body and uses no instrument of any kind in collecting his sponges; he cannot be induced, like the Greeks, to adopt the dress of these, called "skafander," although its practicability must be constantly apparent to him. They are a superstitious lot and cannot or will not overcome the belief that this diver's outfit is conducive to lameness. It is not often that accidents take place during sponge fishing. The depth to which Syrian divers descend is from 25 to 175 feet; below these depths no good sponges are said to be found. Three kinds of sponges are known here; prime, seconds, and the red ones taken near Batroon. The latter are by far the best. They have to be cleaned and freed from sand and then pressed. The best qualities are exported from Beirut to Paris direct, the others go almost exclusively to Trieste, while the Greeks send their share of the catch to different markets in Europe. The average annual catch is estimated at about $150,000 in value. The local authorities exact a tax of 10 per cent. from those engaged in this risky business.

FORESTS.

As no forests exist in this part of the Turkish Empire, most of the wood necessary for building purposes is imported from Karamania and the Danubian Principalities. No attention is paid here to either the preservation of old trees or the planting of new ones. Thousands of fir, oak, pine, and poplar trees fall annually under the ax of the woodman. It is apprehended that, unless the Turkish authorities will take prompt and stringent measures to prohibit this ruthless destruction of the groves and small woods which crown the summits of the Syrian hills and mountains, no wood trees worthy the name will be found before long in any part of this country, which could not fail to exercise its influence over temperature and climate alike.

COMMERCE.

Commerce is and has for some time past been in a most depressed condition. Early in the fall of 1885 hopes were entertained by merchants and manufacturers that fairly good business might be expected with the beginning of the new year, when, most unfortunately to all trading classes, the question of annexing Eastern Roumelia to the Bulgarian Principality suddenly darkened the political horizon and brought the irrepressible Eastern question again conspicuously to the front, quickening at once the sleeping susceptibilities of Servia and Greece and dealing a fatal blow to the commerce, industry, and agriculture of Europe and Asia alike.

The disturbed political condition in Europe, Turkey, and Egypt paralyzed all the mercantile movements of the country and apprehensions of invasions and hostilities on all sides created a restless spirit in the minds of every one and utterly destroyed all confidence, that element so essential in commercial intercourse. Capital was jealously guarded and hoarded, and ready money was firmly held at exceptionally high rates of interest.

SHIPPING.

No sailing vessel or steamer carrying the stars and stripes has entered this port since 1880. The flag of the United States of America, as an emblem of commerce and on an American merchant ship, is almost wholly unknown in this part of the world. Prior to 1860 American shippers had a fair share of the carrying trade of the Mediterranean, but during our war privateers and cruisers in the Straits of Gibraltar, sustained, supported, and encouraged by a power with which the United States was not at war, burned up and absolutely swept our mercantile marine from these waters. In those days thousands of American seamen had to leave our merchant service to form an extensive blockade; over a million tons of merchant shipping were withdrawn from commerce to maintain this blockade and transport vast armies in defense of our Union, and hundreds of thousands of tons of American shipping were compelled to cancel their registers and take refuge under foreign flags to escape destruction from privateers and cruisers. But the world at large, and particularly the people of the United States, are sufficiently well acquainted with the causes that led to the destruction of our merchant marine, and it is just as true as it is mortifying that little, if anything, has been done since by our people to regain the commercial prestige which was so unfairly taken from them.

Up to 1880 American sailing vessels bringing refined petroleum from the United States were still to be seen here occasionally; they were sometimes obliged to leave for home via some foreign port in ballast, but more often found such return freights as licorice root, rags, unwashed wool, hides and skins, cedar wood, olive oil, flax, hemp, linseed, sumac, madder, soap, sponges, sesame, gallnuts, oranges, lemons, apricots, almonds, toilet soap, and sundry Oriental goods. Now these things are all shipped in foreign bottoms, and the principal carrying trade is done by English, Austrian, French, and Russian steamers, and Italian, Greek, and Austrian sailing vessels. Egyptian, Ottoman, and Jerusalem sailing vessels confine themselves strictly to the local coast trade, as do also the Turkish steamers that touch here at irregular intervals.

A new line of Khedivieh (Egyptian) steamers are also making their regular entry twice a week in the Beirut waters; they confine their operations to Alexandria, Mersina, and the intermediate waters. On account of the cholera that broke out a few months ago in Brindisi, Venice, Trieste, Fiume, and other Italian and Austrian ports, all vessels coming from that direction were and are still subjected to five to ten days' quarantine.

The old projected plan of building a port at Beirut has not yet been realized, nor does it seem likely to be in the near future.

The following tabular statement shows the nationality, number, and movement of all steamers and sailing vessels that entered and cleared this harbor during the fiscal year ending June 30, 1886.

Navigation at the port of Beirut for the year ending June 30, 1886.

Flag.	Destination.	Entered.				Cleared.			
		Steamers.		Sailing vessels.		Steamers.		Sailing vessels.	
		No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
Russian....	Odessa to Alexandria	58	2,825	.....	.....	58	2,166	.....	.....
Austrian ..	Trieste to Constantinople	81	7,485	12	3,838	81	3,460	.....	.....
French	Marseilles to Constantinople	71	6,639	.....	.....	71	2,074	.....	.....
English....	Liverpool to Syrian coast	133	7,100	.....	.....	133	4,618	.....	.....
Italian.....	Mediterranean	.....	.....	25	4,670	.....	.....	.....	.....
Greek	Mediterranean	.....	.....	25	2,330	.....	.....	.....	.....
Khedivieh.	Alexandria to Mersine	28	2,632	7	300	28	1,196	7	420
Ottoman...	Constantinople to Alexandria.	7	600	3,100	24,800	7	500	3,100	10,000
Jerusalem .	Jaffa to Syrian coast.....	.....	.....	40	600	.....	.....	40	400
		378	27,281	3,200	36,538	378	14,014	3,147	10,820

IMPORTS.

Notwithstanding that the import trade has not been very active during the past year, and the quantity of foreign goods brought into this market was considerably less than in former years, it has, nevertheless, been found impossible to maintain current prices, and competition in almost every article became very severe. Many of the wholesale and retail houses, although not overstocked, have been unable to pay for the goods bought by them on credit from the foreign commission merchants established here, who represent French, English, German, and Austrian wholesale houses and manufacturers. If these dealers were to be hard pressed for payment a general crisis throughout Syria would, no doubt, be the result.

Most of the foreign silk stuffs that are worn by the better classes of foreigners and natives in Syria are imported from Lyons, which still has a firm hold on this market. Coffee, glassware, packing paper, sugar, perfumery, and wines are also imported from France, and the leather market here is still largely controlled by French merchants. England supplies this country with yarns, bleached and printed calicoes, cotton and woolen goods, cutlery, canned fruits and meats, porcelain and crockery, iron, brass, and copper in sheets, &c. Thousands of pounds sterling are annually sent over to England for the importation of Manchester goods alone, which are now worn by almost all the inhabitants of this country. Austria is fast gaining a firm hold on the Syrian markets. In lamps alone her share of the trade is not inconsiderable, and earthenware, bent-wood and ordinary chairs, furniture and hardware, matches, iron bedsteads, mirrors, fezzes (red caps), flannels, stationery, bric-a-brac, and sundry other goods are imported in large quantities from Vienna via Trieste. The prices and styles of these goods being well adapted to the condition and wants of the masses of the people, have created for them a comparatively large and ready market. Germany too is making a supreme effort to open up a larger field here for her many industries, and is apparently quite successful. The best bronze ware, porcelain, and crystal goods are imported by German commission houses established here. Italy furnishes Syria with rice, marble, paste (macaroni), and glass and earthen-ware in small quantities. Belgium and Switzerland's share of this market consists of red yarns, window-glass, cotton and woolen cloths, and shawls. The imports from the United States were, as in former years, limited to petroleum, sewing-machines, and drugs, and there is but little difference noticeable in the

volume of the last two items as compared with former years; but in petroleum the decline is very marked, the inferior but less expensive Russian oil having, for the present at least, almost wholly replaced the once famous American brands.

Value of goods imported from foreign countries into the port of Beirut during the fiscal year ending June 30, 1886.

[Compiled from various sources.]

Articles.	Whence imported.	Value.
Coffee	Yemen, England, India	$190, 000
Rice	Italy, England, Egypt	400, 000
Flour	Russia, France	25, 000
Furniture	Austria, Germany, France, England	20, 000
Iron	England, Switzerland, Belgium	550, 000
Copper, brass, and steel	France, England, Austria, &c	350, 000
Lead and shots	England, France, Austria	30, 000
Leather	France, Russia	200, 000
Sugar	England, France, Egypt	870, 000
Tea	England, Russia	25, 000
Wine and liquors	France, Austria, England	120, 000
Timber	Danubian territory, Karamania	264, 000
Silk goods	France	280, 000
Cotton stuffs, including Manchester goods	England, France, Austria, and Germany	5, 800, 000
Woolen stuffs and cloth	England, France, Belgium, Switzerland	1, 000, 000
Tombac	Persia	38, 000
Mats	Egypt	7, 000
Caps	Austria, Germany	720, 000
Cutlery	England, Austria, France	25, 000
Nails, locks, hooks, &c	England, France, Austria	45, 000
Candles	Austria, Germany, France	15, 000
Lamps	Austria, Germany	50, 000
Drugs and medicines	Europe and United States	250, 000
Earthenware	Austria, England, France	115, 000
Hardware	England, France, Austria, Germany	150, 000
Glassware and crystals	England, France, Belgium, Switzerland, and Italy.	90, 000
Indigo	England, France	800, 000
Marble	Italy	3, 000
Sewing-machines	Germany, Austria, United States	4, 000
Petroleum	United States, Russia	312, 000
Stationery	Austria, France, England	175, 000
Boots and shoes	France, England, Russia	8, 000
Canned provisions	England, France	40, 000
Christophle ware	France	10, 000
Books	Europe	8, 000
Clothing	Austria, Germany	17, 000
Paints	Austria, England, France, and Italy	36, 000
Salt and spices	England, France, Turkey	172, 000
Miscellaneous		1, 486, 000
Total		14, 200 000

EXPORTS.

The volume of the export trade from this country was, as is usually the case, considerably smaller than that of the imports. Wheat, sesame, and other cereals were only exported in limited quantities. The unsettled condition of the silk market in Lyons for the first seven months depressed the price of Syrian raw silk, which fell to the unprecedentedly low figure of $9 per kilogram ($2\frac{1}{5}$ pounds), but towards the end of February a slight improvement made itself manifest, and prices gradually rose to $10.62. This advance, however, was not sustained for more than three months and the price has again receded, and is now about $10.23, *loco* Marseilles. (All quotations refer to Marseilles, that city being the recognized center of the Syrian raw-silk trade.)

The low price prevailing in both America and Europe for most of Syria's staples has greatly impeded her export trade. Egypt, the principal outlet for Syrian products, appears to have lost much of its former commercial activity since its political policy has been obliged to undergo

a change. The exports to that country have consequently been quite limited. Even the Syrian tobacco, which used to find such a ready sale there and command good prices, seems to be gradually replaced by other markets, notably those of European Turkey. A slight falling off is observable in the wool exports, the total of which was $300,500 in 1885–'86, against $412,250 for 1884–'85; but there is every reason to believe that exports to the United States will greatly increase during the year. Besides unwashed wool, licorice root to the amount of $133,831.13 was shipped to the United States, a large increase over previous years. Iron ore, soap, and Oriental sundries did not vary materially from former years. Small quantities of scammony root, to the aggregate value of $613.17, have also been exported to the United States. Scammony is a species of the genus Convolvulus (*C. scammonia*), is a perennial, and grows wild in various parts of the Levant; the best, however, comes from Aleppo, and when pure contains about 82 per cent. of resin, the active ingredient of a most excellent and trustworthy cathartic. Few drugs are so uniformly adulterated as scammony, and the fact that it grows wild and in abundance, and can be obtained in its pure state in Aleppo, deserves to be better understood by our people in the United States.

On the whole, the export trade of Syria was far from being satisfactory as compared with the volume of imports.

Native goods exported to foreign countries during the fiscal year ending June 30, 1886.

Articles.	Whither exported.	Value.
Raw silk	France	$1,600,000
Wool	United States, France, and Italy	300,500
Tobacco	Egypt, England, and United States	500,000
Rags	England, Austria, and Italy	3,000
Soap	United States and Egypt	45,000
Lemons	Russia, Austria, and England	14,000
Oranges	do	7,000
Raisins	Egypt	60,000
Bitumen	United States and England	3,000
Bones	France, Italy, and England	6,000
Apricot paste	Egypt	6,000
Dried fruits	do	7,000
Oil	Egypt, France, and England	7,500
Licorice root	United States, Egypt, and France	150,000
Goat-skins and hides	France	2,000
Sheep's bowels	do	1,500
Apricot kernels and almonds	France and Austria	83,000
Oriental cotton and gold goods	France, Egypt, and England	25,000
Wood articles inlaid with mother-of-pearl	France, England, and Egypt	2,500
Silk goods	Turkey and Egypt	750,000
Cotton goods	Egypt, &c	150,000
Cereals	England, Austria, and Algiers	40,000
Sheep and oxen	Egypt	55,000
Engraved brass and antique objects	England and France	7,000
Divers goods		1,875,000
Total		5,200,000

CUSTOMS.

Affairs in the Beirut custom-house have by no means improved during the last year, and no change has taken place in the customs tariffs. All foreign goods entering this port are subject to a duty of 8 per cent. The export duty is 1 per cent. to America, Europe, and other foreign countries, and from 2 to 12 per cent. to Egypt and other ports within the Turkish Empire, according to the nature of the goods exported.

The total revenue of the Beirut custom-house for the year ending June 30, 1886, was $731,797. The entry of American pork into the

Syrian market is still prohibited by virtue of special orders emanating from the Sublime Porte and transmitted through the custom-house department at Constantinople to the collector of customs at this port. All pork arriving here, no matter where from, is thrown into the sea by the customs officials, unless the same be accompanied by a certificate bearing the seal and signature of the Turkish consul at the European port of exportation, certifying to the fact that such pork is not American, but the product of the country within his consular jurisdiction.

PETROLEUM.

The unprecedented falling off in the petroleum trade between the United States and Syria becomes not only a matter of grave reflection, but calls for prompt and efficacious action on the part of those whose interest it is to regain, if not its former supremacy in this market, at least a fair share of its former volume, to which, by reason of its priority, it is entitled.

It cannot be said that American petroleum has had to cede its monopoly of this market in order to make room for a superior article, for that would be in direct contravention with truth, as evidenced by the many and loud complaints that are continually heard against its rival; causes of an entirely different nature combined, not to say conspired, to bring about the present situation, conspicuous among which must be mentioned a most determined effort to capture this market irrespective of immediate pecuniary results. To such an extent did this purpose to crowd American petroleum out of this market manifest itself that all the natural laws governing commercial methods were dispensed with and whole cargoes of the competitive oil were offered at an actual loss to the shippers, of which dealers here of course were not slow to avail themselves. This unfair competition utterly demoralized the market. Prices were subject to violent fluctuations, and by dint of forced sales rapidly fell from $1.32 per case of two tin cans to $1.04. Dealers in American petroleum still having stocks on hand were reluctantly compelled to yield, and to save themselves from further loss obliged to turn their entire attention to Russian petroleum to the utter neglect of the former.

Throughout all this period, which may be said to have begun in April, 1885, no efforts appear to have been made by our exporters to stem these inroads upon a market here where hundreds of thousands of barrels of that product, which stands first on the list of the manufactured exports of the United States, had for the past twenty years found ready purchasers, while the Russians were allowed to literally flood this market, and this notwithstanding that much dissatisfaction was expressed as to the unreliability in quality and defective manner of packing their oil.

The moment of its introduction into this market was most propitious, for the difficulties to be encountered were comparatively slight.

It was not necessary to explain the utility of refined petroleum, as had been the case twenty years before, when so much superstition had to be overcome, and the occasional complaints against the alleged deterioration of some of the American brands materially contributed to induce dealers to give its new rival, for which many superior qualities were claimed, at least a trial, and this all the more readily as unusual and enticing concessions were offered in prices, inducements which the average consumer could not resist. Add to this the inexplicable indifference or inertia of our own exporters and the causes for the Russian hold upon this market are obvious.

What concerns us most now is whether this hold is to be a lasting one or transitory only. Should Russia in time be able to produce as well refined an article as the American petroleum is universally conceded to be, there can be but little doubt that it will be permanent, for, irrespective of the first cost of the crude oil, the relative geographical position of the two countries will give Russia a decided advantage over the United States in the important item of transportation, and this will always enable her to undersell us. For the present, unfair commercial practices, intrigues in high circles, and unfair regulations discriminate against us; but this should not impel our exporters to wholly surrender without some effort a market where there is still a limited demand at higher prices of that superior American product, refined petroleum, so favorably known throughout the length and breadth of this universe.

TRADE WITH THE UNITED STATES.

The United States do not participate to that extent in the world's trade with Syria to which, by reason of the excellence and superiority of her wares, the vast resources, liberality, probity, and commercial integrity of her merchants, she is entitled. The reasons for this are largely due to the great distance that separates the two countries, and the consequent unfamiliarity of the wants of Syria by our merchants on the one hand, and the vast and varied commercial means of the manufacturers and merchants of the United States on the other, while the absence of direct carrying facilities undoubtedly materially contributed to impede the development of a more active commercial intercourse. But these obstacles are by no means insuperable, and the growing commerce of Syria offers a wide field for American enterprise, which is now wholly monopolized by the manufacturers of the Old World. It may be urged that Syria's import trade, which is not inconsiderable, as a glance at the figures presented amply demonstrate, is in such safe hands that any attempt on our part to compete with the manufacturers of England, France, Germany, Austria, &c., would prove futile; but upon such a principle we would forever have to abandon every hope of a foreign outlet for our numerous surplus manufactured products, for the country where these nations have not already established trading stations or agencies is not yet discovered.

It may be conceded that our beginning would be fraught with what might appear insurmountable difficulties; but the American manufacturers and wholesale dealers, with their skilled labor, improved machinery, and unlimited facilities, and with a little display of the energy, persistency, and foresight that is so characteristic of them, should not hesitate to enter any market, no matter how strongly intrenched the manufacturers of the Old World may be therein, for once the utility and superiority of American goods are fully understood and recognized in Syria, it will not be found impossible to divert its trade into new channels, and the minor difficulties that now obstruct it will also in time, and with proper efforts on our part, gradually disappear. Letters of inquiry, accompanied by trade circulars from American merchants and manufacturers, reach this consulate from time to time and are always promptly answered; but while this is generally productive of some results, it is far from being the proper means of facilitating new commercial undertakings. Far more efficient measures will have to be resorted to, and we might well profit by the methods of the older countries that have had long and valuable experience in the matter of creating new markets. Among these the economical and practical measures of Ger-

many must at once commend themselves to the earnest attention of our people.

In 1881 a commercial society at Cologne chartered a steamer at Trieste and sent out a special mission, composed of engineers, merchants, and others, for the purpose of visiting all the principal ports of the East, and to report as to the best means of employing capital in industrial and commercial enterprises, and among the numerous recommendations of this commission was "the establishment of an agency, with a sample room, in each of the principal commercial centers in every country," under the experienced management of an able and energetic business man of pleasing address and familiar with several of the modern languages, a recommendation which proved a most important element in the success of such enterprises.

This agent is liberally compensated and represents a certain number of manufacturers and merchants who have formed themselves into so-called "trade associations" (already referred to under the head of Agriculture), and who participate in and share pro rata the necessary expense of maintaining the agency, which, under such conditions, is comparatively small in proportion to the actual results ultimately achieved. This system of representing one or more societies of manufacturers and merchants involves but little capital to any one of them, while at the same time it materially diminishes the ordinary risks to which such individual ventures, intrusted to the ordinary traveling salesmen, who neither knows the language, the people, nor their wants, are subject, and vastly increases the chances of success.

In Syria the principal agency should be in Beirut, with branches at such important distributive points as Damascus, Aleppo, Alexandretta, Mersina, Homs, Hama, and Haifa, or Acca.

A full line of samples is furnished to the agent, who carefully studies the taste of the people and promptly reports their peculiarities and predilections to the different houses he represents. Reciprocally the manufacturers, if they expect to cope successfully with the market, must respond to the suggestion of the agent; for perfect as our manufacturers might consider their products for home consumption, they might not suit the peculiarities of the new market, which, should it give a marked promise of sufficient inducement, ought not deter them from adapting themselves to the new requirements, even if that should necessitate a deviation from their present advanced styles; but it is scarcely necessary to remind them of this, for it is a well-known fact that whatever Americans find necessary to do, they do most willingly and surprisingly well.

Another and rather novel way of familiarizing new markets with the products of their country was recently inaugurated by one of these trade associations. The German steamer Gottorp, of about 400 tons gross measurement, was chartered by the *Central-Verein der deutschen Export-Bank, Berlin*, a syndicate composed of merchants and manufacturers representing various industries, whose miscellaneous and united wares filled every available space of this little steamer and transformed its interior into a veritable floating exhibition, which started on its perambulating trip from Hamburg in February last, touching Spanish and Portuguese ports, and calling at the principal points along the coast of Morocco and Egypt, reaching Beirut finally the latter part of June last, where, after a sojourn of five days, this floating industrial museum left again for other ports within the Ottoman Empire. But the space allotted to each one of the many and varied industries, comprising almost every branch of business, was too limited to allow of

a full and comprehensive representation of any of them, greatly detracting from the avowed object of the enterprise and serious impairing its usefulness. Such an undertaking, carried out on broad and liberal principles, may not at all be one without its ultimate advantages to its promoters; but in this instance it lacked greatly in judgment and comprehensiveness in its practical execution.

In this country where agricultural interests predominate, the credit system is a necessity. The importers and wholesale dealers in the principal trade centers supply the smaller dealers of the interior distributive points, who are mostly natives, and they in turn sell to the consumer.

The wholesale trade in Beirut is to a very great extent in the hands of foreigners—English, German, Austrian, French, Swiss, Greek, and others—many of whom have become very wealthy and all of whom enjoy a good commercial reputation, possessing ample facilities for extending their trade relations. They would most willingly entertain proposals from our merchants and manufacturers, with whose superior mercantile advantages they are not unacquainted. But the initiative must come from us. They will not order or purchase goods without seeing them, and it is needless to expect a merchant in the far East to send for goods from the United States and pay for them before they are placed before him. A thorough mutual understanding must first be had, and this can best be reached through the medium suggested in the preceding pages.

Of the many American articles that might, with well-directed efforts, in time find a profitable market here may be mentioned the following:

Agricultural implements (already noticed under the head of Agriculture) of various kinds, notably the garden plow, which turns a furrow of 8 or 9 inches, and is light, the beam to be very light and long and slightly turned upwards, so that the end can be fastened with a clevis to the yoke of a pair of bullocks. Although by far the greater part of all the agriculturists in Syria belong to the class whose plow consists of a log of wood, the point of which is pointed and shod with iron, and to which a pair of bullocks or donkeys is attached, there are also some large tracts under cultivation where the use of our American implements of simple and strong but light construction could advantageously be introduced.

Butter and *cheese* from the United States come mostly through French and English houses.

Canned goods, fruits, vegetables, preserves, &c., would find a limited market here.

Canned provisions, corned beef, tongues, &c., of approved marks and quality only could be readily marketed here, as it is in Anatolia and other parts within this Empire.

Carpenters' tools of every description.

Chromos would surely find a market here among the Christian population.

Clocks.—The cheap but superior American clocks ought to find a large and ready market; they are already known here and in other parts of the Turkish Empire.

Cotton goods, drillings, sheetings, jeans, unbleached cotton cloth, calico, cotton yarns. Cotton goods should be the same width as the English, and their texture should not be lowered nor filled with gum, as is said to be the case with some. American cotton goods have a most excellent reputation throughout the East, and are sold largely in some countries; there is no doubt that they would find a very favor-

able reception here, and their sale would be almost unlimited; great care should be exercised in packing to guard against damage; £900,000 sterling worth was imported from Manchester alone in 1885.

Flour, in limited quantities, is imported from Russia and France, but our superior milling facilities should not make competition with those countries impossible.

Furniture comes mostly from Austria and Germany, but it is most difficult to find an entire outfit here, and some enterprising American manufacturer placing a large stock here on sale would be amply rewarded for his venture.

Hardware, and all the tools and articles ordinarily classed with hardware. Those in use here are exceedingly crude in form and poor in quality, but the natives wield them with astonishing dexterity.

Iron bedsteads, to the almost utter exclusion of wooden ones, come from England, Germany, and Austria, and represent a very large volume in Syria's import trade.

Jewelry, plated, of the cheaper order, in which the United States undoubtedly excel, could be marketed here in sufficient quantities to compensate the enterprising manufacturer for his venture.

Lamps.—Already noticed under Imports.

Leather comes mostly from abroad, and the American tanners might find it to their advantage to look into the Syrian market for an outlet.

Locks.—This is an article much needed in all Eastern countries; our superior and exclusively American inventions, such as Yales, &c., should have no difficulty in competing with England, France, Austria, and Germany.

Mechanics' tools of every description are much needed here and would surely find a responsive market.

Patent medicines are largely sold in other countries on the Mediterranean, and would surely find a ready and profitable market here if prices could be reduced to conform to the condition of the people. Some of the better-known ones are already represented here and are favorably received by the people.

Pumps.—These have already been introduced in Anatolia and other ports within the Turkish Empire and would undoubtedly be received with favor here.

Rice comes mainly from Italy, but Egypt and England also contribute a fair share towards the enormous consumption of this article in Syria.

Sewing-machines.—Noticed among the imports. Their sale is limited, but could be greatly increased with energy and persistency.

Silver-plated ware could be marketed in considerable quantities in Beirut alone, for there is much wealth and opulence here, and the average ware usually seen in the houses of the "first families" is not worthy of the above appellation.

Stoves suitable for petroleum, if neat and not too expensive, would find a ready sale here; other kinds are useless, for houses have no chimneys here.

Sugar.—The American cubed sugar, by reason of its superiority and cheapness, ought to distance all other competitors, and crushed sugar of the lower grades would find large consumption in the interior towns.

Watches might possibly find a limited sale; but the finer grades would come too expensive for the average Syrian consumer.

Windows and *doors*, ready-made, might be advantageously introduced in all the leading cities throughout Syria; those made here are all hand made, of very inferior wood.

Wood, such as pine, mahogany, &c., could be sold here; it has to be

imported from Karamania and Egypt. Every furniture dealer and manufacturer speaks of mahogany, but not one of them can produce one single piece of it.

Yankee notions.—Many articles known under this name would find a ready sale in Syria; they have already a good reputation in Anatolia and elsewhere.

The uniform import duty on all these articles is 8 per cent. ad valorem.

The question of packing is also one that should not be lost sight of, and in this, also, the older and more experienced commercial nations of Europe might be aptly cited, as some of them, notably the French, have arrived at perfection in this not unimportant part of the business. Regular packers are employed in the large establishments, who have become thorough experts in their trade. A close-grained and tough wood, that will not easily split, and is only about one-half the usual thickness of the average American pine box, is generally used, materially lessening its weight. Round, wrought-iron wire nails are used in preference to the flat, cast-iron American nail, which can be much more readily drawn out of the wood.

Goods should be packed in tin cases hermetically sealed and then placed in the wooden box, which must, as an additional precaution, be banded with iron straps.

The rates of insurance on merchandise so packed are appreciably lower than when these safeguards have been omitted.

As regards the subject of transportation, it is not a very difficult or serious one: there is a regular and direct line of English steamers plying between Liverpool and Syrian ports, and freight rates are very low indeed; and how depressed carrying rates are between the United States and Liverpool, owing to excessive competition, our exporters need not be told by this consulate.

The following shows the limited movement of Syria's export and import trade with the United States, which it is hoped the foregoing pages may tend to stimulate into greater activity:

Exports to the United States during the year ending June 30, 1886.

Articles.	Amount.	Value.
	Pounds.	
Licorice root	6,115,000	$133,831 18
Unwashed wool	549,477	42,928 52
Iron ore	501,000	4,844 59
Oriental goods	.....	385 98
Scammony root	1,110	613 17
Total	7,166,587	182,553 39

Imports from the United States during the year ending June 30, 1886.

Articles.	Quantity.	Value.
	Cases.	
Petroleum	60,896	$80,383
Sewing-machines	.....	400
Drugs	.....	150
Total	60,896	80,933

GENERAL CONDITION OF THE COUNTRY.

For the last few years there has been a gradual improvement in the general condition of Syria. Education has become almost universal, through the benevolent agency of American missionary societies, whose noble efforts to elevate and enlighten the natives by their secular and religious teachings—in which they are so ably seconded by the numerous French and English missions and German benevolent establishments—have been so eminently successful, as evidenced by the ameliorated social, material, and intellectual condition of the present generation.

Not only those worthy institutions, our colleges, with their medical adjuncts, but hundreds of our mission schools, diffusing knowledge and inculcating moral principles into juvenile and adult alike, and representing hundreds of thousands of American capital, generously contributed by an ever-responsive people, cover the country from the Mediterranean to the Euphrates, from Palestine to the very confines of ancient Assyria, and are within the limits and protection of this consulate. It is, therefore, to be greatly regretted that an adverse spirit should lately have manifested itself against these laudable institutions and the good people conducting them, whose purity of purpose and the generous zeal which characterizes their daily labor should not only insure for them absolute immunity from harassment and opposition, but secure for them the hearty co-operation of the Government to the benefit of whose people their lives of denial and sacrifice are devoted.

The wholesome influence of these colleges and schools, and the continual contact with the European residents here, whose numbers are constantly increasing, have greatly changed the habits and customs of the native Syrians, both in their intercourse with the outside world and in their domestic relations among themselves.

Of the material improvements it is worthy of note that private residences and business structures are multiplying; that vast new tracts of land in the plains of Mesopotamia and elsewhere are being brought under cultivation; while the great obstacle to a more rapid material progress, the want of adequate intercommunication between the littoral and the interior, is receiving the earnest consideration of the authorities in the construction of good roads, some of which have already been completed, with others in progress and many more projected. A regular trunk line of railways is in contemplation, and is to unite Constantinople with the Persian Gulf, with a perfect net-work of feeders to connect all the seaboard cities with the interior. The first of these is already built; it runs from Mersina, on the Mediterranean, to Adana (in the interior), the capital of the vilayet (province) of the same name, and is intended to ultimately connect with the projected main line. It is 68½ kilometers in length, and built by an English company.

The population of Syria is constantly increasing, and is now roughly estimated at between 2,500,000 and 3,000,000; but in a Mohammedan country statistics as to the number of its inhabitants are never reliable, even if they were accessible, which is rarely, if ever, the case.

The equanimity of the Moslem population has twice within the past twelve months been subjected to a very severe test: first in December last, upon the advent of the Greco-Turkish question, when a large contingent of Syrian troops was called out, and recently again when the political changes and events in Bulgaria made similar precautionary measures necessary; but, although the commotion and excitement in

both cases were very great, popular demonstrations were strictly limited to illy-disguised manifestations of displeasure and irritation.

The gradual but general improvement in the country is also increasing its revenues, and to the customs duties and tithes tax, already adverted to, must also be added $72,597 collected as a military tax, and $350,787 as a sheep and miscellaneous tax, most welcome contributions to the greatly depleted Imperial exchequer.

Slowly but surely is this vilayet, with its varied and unrivaled climate and its vast possibilities, awakening from its lethargy of centuries to the consciousness that millions of treasures are hidden beneath the rich soil that await but the assiduous plowman to reward his labors with bountiful harvests.

ERHARD BISSINGER,
Consul.

UNITED STATES CONSULATE,
Beirut, June 30, 1886.

EGYPT.

CAIRO.

Report of Consul-General Cardwell.

GOVERNMENT.

Egypt is nominally a vice-royalty, under the suzerainty of the Sublime Porte, relations being regulated by the treaties of 1840 and 1841. In the latter year a special firman was granted, in which hereditary right to the Government of Egypt was fixed in the family of Mohammed Ali. In 1866 another firman extended the family succession from father to son, instead of, as is the usual Mohammedan custom, to the oldest member of the family. In 1867 another firman was issued, bestowing upon the ruler of Egypt the title of "Khedive" (king), derived from *khedewi*, a Persian word. By this grant the sovereign of Egypt gained all but the suzerainty dependence of Turkey; it removed him from among the wâlis, or governor-generals of provinces, with whom he had formerly ranked. Further firmans have confirmed and extended his privileges, until at last he is practically independent of the Porte, the only evidence of such vassalage being in the payment of an annual tribute to Turkey. This, as shown in the following budgetary tables, amounts to 678,397 Egyptian pounds,* equivalent to $3,391,985.

The Khedive is assisted in government by a privy council and ministers appointed by himself. The privy council consists of the ministers, the sheik-el-Islam, and other functionaries. The ministers are eight—those of finance, foreign affairs, public works, interior, commerce, war, marine, and public works and instruction. There is also an "assembly of notables," composed of village sheiks elected by the commune, which meets for a short time every year, but its power is extremely limited.

The country is divided into provinces or moudiriehs, each under a governor, known as mudeer. The mudeer is assisted in provincial

* Values are expressed in Egyptian pounds throughout this report unless otherwise specified. The consul-general gives the value of the Egyptian £ as $5.

administration by a council, of which the principal members are the deputy governor (wekeel) and the native judge (kadi). Each province is divided into districts, presided over by nazirs; and every village in a district has its chief, known as sheik-el-beled. The cities of Cairo, Alexandria, Port Said, Suez, Ismailia, Damietta, and Rosettas maintain government entirely independent of provincial government. Territory outside of Egypt proper is governed according to varying regulations.

ARMY.

By the Turkish-Egyptian understanding of 1840–'41 the Egyptian army was limited to 18,000 men. At times, however, it has exceeded these figures. In theory every Egyptian is bound to serve, but conscription is not always enforced in justice. The Government, in all processes, knows no one but the sheik, and he produces the men of military age. In by no means a few instances the sheiks make improper returns, the result of private transactions with those left out of the conscription. Exemptions are purchased from the Government for £100 each, and the revenue from this source is £200,000 annually. The army appropriation, exclusive of the outlay for the army of occupation, was for 1886 £130,151. A police force is separately organized, embracing the gendarmerie, the expense of sustaining the two being £238,100. There is no reason in the separate organization of army and police. They are both distinctly military, and for more efficiency as well as for economy they should be combined under the same command.

The marine is unimportant now, while under Mohammed Ali the Egyptian navy was one of the most powerful afloat.

ADMINISTRATION OF JUSTICE.

To the present prime minister is Egypt indebted for an administration of justice. If for no other reason the name of Nubar Pasha should be revered by Egyptians, and his life be respected by all civilized people. Before he instituted the present courts of the country justice was mere chance. Official violence preceded his administration of justice; one-man power, taking life, property, all, was supreme. The muddy waters of the Nile closed over the victim of personal power and judgment. From Khedive to sheik there was no arbitrament between vindictiveness and weakness. Upon khedives and prime ministers, upon pashas and upon slaves personal vengeance was wreaked without fear. Nubar Pasha's court succeeded these conditions, substituted a criminal power, lifted Egypt out of semi-anarchy and despotism, inaugurated an era of justice towards the highest and lowest people of the realm, placed Egypt on an elevated governmental plane, and laid the foundation of a real nation upon the sacredness of human rights.

The courts of justice are composed of mixed and native tribunals. There is a mixed court of first instance at Cairo, and one at Alexandria, and a mixed court of appeals at Alexandria. Each of the courts of first instance is composed of seven judges, of whom four are Europeans and three natives; and no case can be decided by less than five judges, three Europeans and two natives. The court of appeals consists of eleven judges, seven Europeans and four natives; and no case can be decided by less than eight judges, five Europeans and three natives. Civil and commercial causes between foreigners of different nationalities, and between foreigners and natives, are decided in the mixed tribunals; and the Khedive and his government are amenable

without appeal to the mixed tribunal of last resort. The system of legal administration is based upon the "Code Napoleon." These courts were established in 1876, on trial for five years; and at the expiration of this term they were re-established for five years more.

There are also mixed correctional courts.

The native courts are built up upon a system of justice taken from the Koran, in which all the elements of both religious faith and observance, and of civil and criminal jurisprudence are embodied. The judges of the native tribunals, the kadis, possess a sort of religious character. Every province has its kadi, the chief of all being at Cairo, who is named by the chief of Moslem, the Sultan of Turkey.

EDUCATION.

Education made considerable progress in Egypt during the reign of Ismail Pasha, the present exiled ex-Khedive. Mohammed Ali established public schools, but they were neglected by his immediate successors. Ismail Pasha, however, endowed them and put them into good practical operation. He not only established Government schools, but he lent aid and encouragement to mission schools under the direction of Christian communities. This was notably the case in regard to the American mission schools in Egypt.

The Government schools are divided into primary, secondary, and special schools.

There are also military schools, and a university at Cairo which embraces a well-organized and most reputable school of medicine, having in attendance at this time about two hundred medical students.

The free native schools, in which the Koran and reading and writing are taught, are very numerous. One is attached to every "sebeel," or drinking fountain; and some of the mosques have schools attached to them, in which the Mohammedan religion and law are taught.

All the different Christian organizations maintain schools in all the important cities and towns, and there are American, English, French, German, and Italian schools in Cairo and Alexandria. The headquarters of the Egyptian schools are at Cairo, and the system of public education is under the direction of the ministry of public instruction.

Attached to the university at Cairo are, besides the school of medicine, a polytechnic school, a school of law, a normal and training school, a school of art and design, professorial schools, a school of pharmacy, and a special school for the tuition and training of midwives. Every year, too, the Government selects a certain number of promising young men, who are sent to Europe and educated there at public expense. It also maintains an observatory and a weather bureau with a corps of officials. There is also maintained at public expense a school infirmary.

The ministry of public instruction has the following allowances:

For—	1886.	1885.
Administrative bureau	£9,868	£8,422
Schools	53,146	67,219
Various services	5,478	9,048
Totals	68,492	84,689

The above expenditures represent, for 1886 and 1885 respectively, $342,460 and $423,445, a very significant reflection of what English oc-

cupation and dictation are doing in the cause of advancement in Egypt. Several schools were suspended in 1886 in consequence of the diversion of public funds to other purposes incident to the present condition of the country. The military budget for 1886 called for £188,625 more than was required in 1885. The increase was mainly due to further demands for the army of occupation.

AMERICAN SCHOOLS.

It would be improper to quit the subject of education in Egypt without special reference to the work of a noble band of American educators who began their good deeds in the Nile Valley thirty-one years ago. I refer to the educational and evangelistic labors of the United Presbyterian Church Mission in Egypt. Without giving an insight into the hard up-hill work of the first twenty years of the missions, I will simply present a comparison at the beginning and the ending of the last decade:

Items.	1885.	1886.
Number of schools	23	65
Number of teachers	78	126
Pupils in attendance	1,151	5,414
Tuition and other fees	$797	$11,653

The summary and comparison of educational work for 1885 and 1884 present the following figures:

Description.	1885.	1884.
Missionary schools	12	12
Congregational schools	54	47
Theological school	1	1

The missionary schools are at Assioot, Cairo, Mansourah, Boulak, Alexandria, and one or more other places. At Assioot there is a training college, which enjoys a very high reputation. A very large proportion of pupils are taught free of cost.

Of the pupils in the missionary schools the different religions are represented as follows:

Protestants	320
Copts	1,175
Moslems	571
Roman Catholics	86
Greeks	153
Jews	184
Others	25

Nationalities appear as follows, 1885:

Egyptians	1,147
Syrians	94
Europeans	119
Others	38

The branches of tuition are: Geography, arithmetic, Arabic grammar, Christian studies, English language; algebra in Arabic; geometry, &c., in Arabic; physiology, &c., in Arabic; French language, music, &c.

The Congregational schools had an attendance in 1885 of 2,800 pupils.

In them a huge work is being done by toiling, self-denying laborers in a grand cause.

In 1857 the first mission school in Egypt was established in Alexandria. In 1873 the first was opened in Cairo. In 1885 there were 2 schools in Alexandria, 9 in Cairo, 5 in Mansourah, and 4 in the Fayoom, the others being scattered all over Egypt as far south as Edfoo.

The educational work of these missions will make its impress on the future of Egypt. Very many who have been educated in the schools are now in the service of the Egyptian Government, giving great satisfaction. Many are directing their energies in the pursuits of the various trades and professions. The names of Dr. Lansing and his associates live in the hearts of many in Egypt. Their labors will widen and each year effect greater and greater good. Good people of all the world should substantially commend the noble men and women of these missions.

PUBLIC WORKS.

The distressed financial condition of Egypt is due in a very great measure to the prosecution of public works, in which it has undoubtedly been robbed of enormous sums of money. Too much was attempted in too short a time. The Suez Canal absorbed ten millions of pounds ($50,000,000); and then the shares owned by Egypt were obtained by the British Government for three and a half millions. When Ismail Pasha came to the Khedivial succession only 245 miles of railway had been built. In fifteen years he increased the mileage to over one thousand. He built extensive telegraph systems, made harbor improvements, and built light-houses, and opened great canals, all of which was proper enough as a means for developing the country, but the indebtedness created by all this improvement has been very onerous. Since Ismail abdicated in favor of his son, Tewfik Pasha, public works, because of the financial distress of the country, in consequence of internal disorder, and finally because of demands for sustaining an English army of occupation, have been pursued on a much more moderate scale. Public works are conducted under the direction of a ministry, as heretofore stated, with headquarters at Cairo. The budget shows expenditures as follows:

Public works administration.

Subjects of expenditure.	1886.	1885.
Official salaries and expenses:		
Chief department	£30,963	£28,171
Provisional service	42,469	41,711
Municipal service	33,778	36,122
General expenses	10,190	10,000
Total	117,349	116,004
New works:		
Provinces	65,000	62,000
Cities	34,642	28,000
Total	99,642	90,000
Repairs:		
Provinces	108,000	116,000
Cities	74,158	111,000
Total	182,158	227,000
Irrigation:		
Behera Irrigating Company	36,820	40,000
City of Rosetta	1,000	.....
Total	37,820	40,000

Public works administration—Continued.

Subjects of expenditure.	1886.	1885.
Miscellaneous:		
Museum and antiquities	£5,808	£5,700
Towage	12,000	10,500
Exploration for petroleum	4,280	.....
Theater	2,500	.....
Total	24,588	16,200
Grand total	464,623	513,400

"New works" in the above table comprise small canals, bridges and gates, sluices, conduits, culverts, and buildings. "Repairs" embrace defense against inundation, repairs on works of art, dredging and damming in the provinces, repairs on gas and water works and fixtures, on streets, buildings, and bridges in cities.

GOVERNMENT RECEIPTS AND EXPENSES.

Without particularization in detail of all the departments of Government, I simply subscribe a series of tables, copied in detail from the budgetary reports. They will afford a comprehensive insight into the character and purposes of government in Egypt.

Budget of receipts of 1886, *compared with those of* 1882, 1883, 1884, *and* 1885.

Heads.	1882.	1883.	1884.	1885.	1886.
Direct taxes:					
Land tax	£5,036,667	£5,065,211	£5,061,798	£4,819,704	£4,848,106
Other direct taxes	304,952	302,473	304,405	296,296	302,163
Total	5,341,619	5,367,684	5,366,203	5,116,000	5,150,269
Indirect taxes:					
Customs	711,600	715,100	731,390	785,400	909,400
Municipal taxes	271,960	273,190	305,460	317,500	339,720
Salt and niter	166,370	179,339	207,500	205,000	218,496
Fisheries	92,730	90,065	91,013	95,000	95,824
Taxes on shipping	94,985	95,333	95,562	60,000	67,901
Stamp and registration	83,468	81,811	62,824	80,000	53,319
Various taxes	83,110	84,454	89,080	86,007	82,240
Total	1,504,223	1,519,292	1,582,829	1,628,907	1,766,912
Revenues:					
Railroads	1,093,530	1,093,530	1,200,155	1,254,555	1,399,760
Telegraph	35,000	35,000	45,000	40,000	48,000
Port of Alexandria	65,015	65,015	65,845	70,000	95,000
Post-office	87,625	88,600	91,850	98,500	109,550
Khedivial postal packets	85,350	108,900	103,000	106,400	108,900
Light-houses	66,560	70,000	80,000	90,000	90,000
Ports (other than that of Alexandria)	4,410	4,350	4,450	4,800	3,900
Mints	18,510	12,963	7,200	5,080	6,702
Total	1,456,000	1,478,358	1,597,500	1,669,335	1,861,902
Receipts from administrative service:					
Various receipts	285,019	287,004	338,306	348,598	353,428
Rent and products from Government property	77,060	79,274	77,000	80,944	76,452
Retained for pensions of officials, beginning with first day's service	56,560	55,682	52,731	52,731	42,622
Repayment of advances to villages	26,070	17,333	165	.....	.....
New imposts	.....	.....	100,000	.....	40,000
Total	8,746,556	8,804,627	9,114,734	8,896,515	9,291,586
Deduct irrecoverable claims	.....	.....	.....	.....	50,000
Total	8,746,556	8,804,627	9,114,734	8,896,515	9,241,586

Budget of expenses of 1886, *compared with those for* 1882, 1883, 1884, *and* 1885.

Heads.	1882.	1883.	1884.	1885.	1886.
Civil list, grants, Khedivial cabinet:					
Civil list of the Khedive	£100,000	£100,000	£90,000	£90,000	£90,000
Grants to the Khedive's relatives	215,000	215,000	207,500	208,100	208,100
Khedivial cabinet	59,725	62,339	61,705	60,000	60,000
Total	374,725	377,339	359,205	358,100	358,100
Public security:					
Ministry of war	427,262	204,321	227,022	130,975	130,151
Marine	64,899	40,528			
Gendarmerie and police	238,481	324,117	240,796	247,650	238,100
Prisons	18,197	22,011	26,550	22,000	26,300
Army occupation					195,000
Total	748,809	590,977	494,368	400,625	589,551
Expense of administration and collection:					
Council of ministers	9,292	9,709	6,712	6,712	5,310
Legislative council	5,768	5,768	8,457	8,000	8,000
Ministry of foreign affairs	13,162	11,999	11,026	12,026	11,755
Ministry of finances	220,103	197,030	178,329	186,569	198,994
Ministry of public instruction	89,464	99,549	99,977	84,689	68,492
Ministry of the interior	120,706	113,696	102,548	101,206	119,999
Ministry of justice	294,743	297,063	318,473	323,654	322,960
Ministry of public works	409,106	515,101	542,078	513,004	464,628
Various services of the departments	130,454	116,789	75,689	95,105	91,510
Service of administration and collection in provinces, districts, municipalities	320,042	339,171	333,174	331,274	339,184
Customs	63,579	62,809	64,541	67,981	83,014
City tolls	43,350	43,326	42,632	42,461	43,477
Salt and niter	70,040	72,551	69,365	69,545	64,663
Fisheries	15,746	13,601	9,508	11,864	11,574
Collection of taxes on shipping	4,645	4,580	4,135	3,047	2,961
Total	1,810,200	1,903,262	1,867,144	1,857,187	1,836,516
Collecting special revenues:					
Railroads	442,125	506,544	542,945	542,696	637,000
Telegraph	35,403	39,700	40,000	41,765	42,000
Port of Alexandria	25,787	29,300	29,428	30,289	29,000
Post-office	80,000	79,000	79,050	84,140	90,346
Khedevial postal packets	120,000	110,000	115,678	120,600	106,404
Light-houses	26,765	27,377	26,496	31,496	31,239
Ports(other than that of Alexandria)	3,076	3,000	11,129	11,129	11,561
Mint	6,631	5,560	2,613	2,413	2,413
Total	749,787	812,481	857,339	865,178	949,963
Soudan:					
District of Souakim					50,000
Portion of pensions					50,000
Eastern Soudan		100,000	110,000	120,000	
Total		100,000	110,000	120,000	100,000
Pensions and retainers for services	255,964	255,798	336,835	453,200	434,000
Tribute and public debt:					
Egyptian tribute	678,486	678,397	678,397	678,397	678,397
Debt consolidated and unconsolidated	3,795,997	3,773,164	3,753,499	4,204,432	4,286,219
Total	4,474,483	4,451,561	4,431,896	4,882,829	4,964,616
Unusual expenses				682,333	
Reserve funds for unforeseen expenses	50,000	90,000			
Total	8,463,963	8,581,913	8,456,787	9,619,902	9,232,746

INTERIOR DEPARTMENT.

An insight into this department of the Egyptian Government may be of interest as showing public tendency in matters but lately taken in charge. Its efforts are directed towards the conservation of public health, and therefore sanitation is one of its features. The total outlay for the last two years has been, respectively, £101,206 and £120,518, distributed as follows:

Subject of expenditure.	1886.	1885.
Chief department	£27,718	£29,400
Chief bureau	8,233	5,612
Central storehouses	646	----
Medical service in Cairo	4,563	4,400
Hospital service in Cairo	15,637	13,694
Medical service in Alexandria	2,595	2,919
Hospital of Alexandria	4,343	5,352
Medical service in provinces and districts	22,215	27,220
Sanitary inspection of provinces	----	2,970
Veterinary service	2,218	----
General furnishing	4,800	3,200
Indemnity	377	----
Reserves	2,508	2,773
Chemical laboratory	1,333	----
Watering and sweeping Cairo streets	18,064	----
Egyptian archives	4,269	----
Total	120,518	101,206

The sanitary service comprises the hospitals at Cairo and Alexandria; also the foreigners' and maternity wards.

The practice of medicine in Egypt is regulated under the sanitary bureau. No doctor is allowed to practice until he has been officially recognized, and this consists in laying before this bureau proofs of his qualification to practice his profession. If he be graduated from a foreign school of medicine, he must not only produce his diploma for inspection, but the bureau reserves to itself the right besides to pass upon the merits of the institution granting the diploma. The same rules of recognition apply to midwives. The right to practice is announced in the columns of the *Journal Officiel*, the organ of the Khedivial Government.

POSTAL SERVICE.

Formerly nearly all the European Governments, with a considerably quota of population in Egypt, maintained post-offices at Cairo and at Alexandria, but with one or two exceptions there is at present none of this foreign postal service in Egypt. There is no just cause for any such offices, for the Egyptian postal service is a good one, and mail matter is handled with most satisfactory dispatch under governmental direction. There are lines of fast steamers, carrying foreign mails between Alexandria and Port Said, and many of the more important Mediterranean ports of Europe and Asia, and towards India, China, Japan, and Australia. Egypt belongs to the "Postal Union," the rate per ounce being one piaster tariff (5 cents) on letters, and one-half piaster on book packets, and one-quarter of a piaster on newspapers. The "Union" postal cards are also in use. The same rates are charged on internal mail matter. All the cities and principal towns have postal service.

TELEGRAPH.

There are two telegraph systems in Egypt, one belonging to the Egyptian Government, the other to a foreign company. The Egyptian system at one time extended over 4,000 miles, reaching into the Soudan, but under the present administration it is less, while the cost of administering the system is four times as much as it was when there was more service, presenting again the difference in cost of foreign and native official service. The wires under the old administration extended even beyond Khartoum, to stations on the White Nile, with branches to Kordofan and Darfoor, and to Kassala, whence they connected with the Red Sea line. The price of transmission on the Egyptian lines was, under the old administration, 5 piasters for ten words; under the new it is 10 piasters for ten words. At most of the stations messages may be sent in English, French, and Italian, while Arabic is in common use for all.

MONEY.

The only money of Egypt is coin—silver and gold; and the para is the multiple of all. A formulated table might be presented as follows: 40 paras make one piaster, 500 piasters make one purse—or one Egyptian pound (£E. 1).

Until very recently there were legally current in Egypt the coins of almost every nation of the globe. The great variety of coinage became a very great evil, and, with the exception of very small change, almost drove Egyptian silver coin out of circulation. Very properly, in consequence, the Government, during the last year, presented the country with an entirely new coinage of silver, which it forced into general use by placing a discount on all foreign silver coin, a great amount of which was of short weight, and spurious. Counterfeiters have had a rich field of operation here. They counterfeited the Egyptian silver coins of all denominations, and it really seemed as though half of the silver piasters in circulation were the outcrop of counterfeiting. The new coinage consists of 20-piasters, 10-piasters, 5-piasters, 2-piasters, and 1-piaster in silver, and of one-half, one-quarter, and one-eighth piasters in nickel, and of 2-paras in copper. All the new coinage is very beautiful, and the very strict measures adopted by the Government, it may be hoped, will prevent counterfeiting. The old coinage is almost wholly taken from circulation, the Government having adopted the plan of never paying it out when received for dues. The new coinage has now almost wholly driven out the old Egyptian coin, as well as the silver coins of foreign countries, and yet the work of placing the new coin in circulation began only about eight months ago.

Of Egyptian gold coinage there are 500-piaster pieces and 250-piaster pieces in very general use. English pounds and French napoleons are also largely in circulation.

Paper money is unknown.

WEIGHTS AND MEASURES.

The Government regulates weights and measures. They are:

8 mitkál make 1 okéa, or Arabic ounce.
12 okéa make 1 rotl (about 1 lb. 2 oz. 8 dwt., troy).
2¾ rotl make 1 oka (about 2 lb. 11 oz).
100 to 110 rotl make 1 kantár (about 98¾ pounds avoirdupois).
108 rotl make 1 kantár for coffee
102 rotl make 1 kantár for pepper.
120 rotl make 1 kantár for cotton.
150 rotl make 1 kantár for gums, &c.

FOR GOLD, GUMS, ETC.

4 kumh (grains) make 1 keerát, or kharóobeh.
64 grains, or 16 keerát make 1 derhm (47¼ to 49 grains English).
1¼ derhm make 1 mìtkál (1 drachm to 72 grains English).
12 derhm make 1 okéea or ounce (571¼ to 576 grains English).
12 okéea make 1 rotl or pound.
150 rotl make 1 kantár.

MEASURES OF LENGTH.

Fitr, or span, with forefinger and thumb.
Shibr, longest span, with little finger and thumb.
Kubdeh, human fist, with thumb erect.
1 drah beledee, or cubit = 22 to 22¾ inches English.
1 drah Stamboolee, or pik = 26 to 26¼ inches English.
1 drah Hindázee (for cloth) = about 25 inches English.
2 bah (braces) = 1 kassobeh or 11¼ feet English.

LAND MEASURE.

22 kharoobeh, or kúbdeh, make 1 kassoobeh = 11 feet 4¼ inches, to 11 feet 7¼ inches English.
13⅛ kassobeh = 1 keerát.
24 keerát = 1 feddan (about 5,082 square yards, or $1\frac{1}{10}$ English acre).

CORN OR GRAIN MEASURE IN LOWER EGYPT.

9 kuddah make 1 melweh.
4 kuddah make 1 roob.
2 roob make 1 kayleh.
4 roob make 1 waybeh.
24 roob make 1 ardeb.

CORN OR GRAIN MEASURE IN UPPER EGYPT.

4 roftow make 1 mid.
3 roob make 1 mid.
8 mid or 6 waybeh = 1 ardeb, or nearly 5 English bushels.

PUBLIC DEBT.

The public debt of Egypt is as follows:

General debt:	
Unified 4 per cent	£. E. 55,990,440
Privileged 5 per cent	22,296,800
Guaranteed obligations, 3 per cent	9,301,700
Hypothecated debt:	
Domaines	7,436,080
Daïra, 4 per cent	8,659,500
Total	103,684,520

The annual interest payable upon the above, respectively, is:

Unified	£. E. 2,239,617
Privileged	1,114,840
Guaranteed (with amortizement)	315,000
Domaines	371,804
Daïra	346,380
Total	4,387,641

The following tables, taken from the budget, treat of the consolidated debt; in them are the itemized features of receipts and expenses regarding annual treatment of the debt:

Budget of receipts for consolidated debt.

Heads.	Provinces affected.	Railroad, telegraph, Alex. port.	Customs.	Budget, 1886.	Budget, 1885.
Direct taxes	£. E. 2, 438, 879			£. E. 2, 438, 879	£2, 430, 735
To deduct:					
Decrease in taxes £260, 000					
Partial suppression of the corvée 100, 000					
	160, 000			160, 000	80, 000
	2, 278, 879			2, 278, 879	2, 350, 735
Indirect taxes	78, 766		£909, 400	988, 166	861, 784
Receipts from the administrative service	42, 035			42, 035	47, 021
Revenues		£1, 535, 350		1, 535, 350	1, 356, 850
Rent and produce from Government property	27, 677			27, 677	29, 815
Retained for pensions of officials	2, 981			2, 981	11, 796
	2, 425, 338	1, 535, 350	909, 400	4, 870, 088	4, 658, 001
To add:					
New imposts				20, 000	
				4, 890, 088	
To deduct:					
Irrecoverable claims			15, 000		
Seven per cent. of gross receipts of four provinces affected (article 9, law liquidation)			169, 774		
				184, 774	175, 409
Total				4, 705, 314	4, 482, 592

Budget of expenses for consolidated debt.

Heads.		Budget, 1886.	Budget, 1885.
Expenses of administration and collection: Customs		£. E. 83, 014	£. E. 67, 981
Collecting special revenues:			
Railroads	£. E. 630, 000		535, 351
Telegraphs	42, 000		41, 765
Port of Alexandria	29, 000		
		701, 000	80, 989
Tribute to the Porte and the public debt:			
Guaranteed debt	307, 125		
Privileged debt	1, 066, 969		1, 158, 263
Unified debt	2, 183, 652		
		3, 577, 746	2, 183, 662
		4, 361, 760	4, 017, 961
Exceeding receipts (deficit)		343, 554	464, 631
Total		4, 705, 314	4, 482, 592

The deficit is not correctly stated; and this objection is one that is applicable to almost all the governmental reports. They are incorrect either by virtue of a system of guessing or by intention. There was a reported surplus for 1885 of £900,000, when in reality it was but £503,979; and this was absorbed by the Daïra and Domain deficit. So, too, the acknowledged deficit of 1886 does not represent the real fact. Only

£20,000 appears as transferred to public works, when the real transfer is £1,000,000. Much of this huge sum of money will be improperly absorbed, but a part of it will be used in improving the barrage; that much of which will be expended in a very proper cause. The small sum represented to have been expended in search after petroleum will cut no figure in the sum total chargeable to the investigation and search after petroleum.

It is believed, and on good ground, that the Government has already been bled on this score to the extent of nearly £70,000; and this expenditure goes on a mere hypothesis. Egyptian finances are poorly conducted. The reformation, consequent upon the new order of things in Egypt, is about as real as the advance of English troops into the Soudan.

PROSPECTING FOR PETROLEUM.

A great deal has been said about petroleum discovery on the Egyptian Red Sea coast. The Government had some shafts sunk there early last year, and quite a quantity of petroleum flowed from the earth. The oil was found at a depth of 150 feet, and the flow was exhausted in a very few days. It was then determined to make a geological survey of the region supposed to be charged with petroleum. With this object Mr. Mitchell, a citizen of the United States, was employed. He went to Gebel-el-Zeit and remained in the field about four months, and as a result he reports an extended field charged with petroleum. Dr. Tweddle, another citizen of the United States, has a contract with the Egyptian Government to direct and superintend investigation. He was allowed £30,000 with which to buy boring apparatus and other necessary material for prospecting, and for over three months he has had a large force at work at Gebel-el-Zeit, boring a number of holes into the earth, none of which, however, have reached a much greater depth than those sunk nearly a year ago by the Government. As yet, however, petroleum has not been struck in any of the holes, and I have grave misgivings, as I have before stated, that at less than a very great depth oil will never be tapped. Very large sums of money have been spent—sums far in excess of what was first proposed and agreed upon—and the prospecting progresses very slowly. The strings of the Egyptian purse have been generously loosened, and its contributions have been most lavishly expended, while prospecting has been slow indeed. Hoping Egypt may be rewarded, I at present take leave of this subject.

POPULATION.

The total population of all the countries claimed as embraced under Egyptian rule may be placed at 16,000,000. Of this number only abou. 6,500,000 belong to Egypt proper. It was considerably larger in ancient times, in the Memphite periods, as believed by many, holding sway throughout the then known world. Surely traces of Egyptian impress exist throughout Asia and Africa. Coming down to a much later period, Herodotus estimates Egypt in the time of Amosis as containing 10,000 populous cities. Diodorus places the population at 7,000,000, and Josephus fixes it at 7,500,000 in the reign of Vespasian. In the time of the Mameluke it was reduced to about 3,000,000. These cruel rulers well-nigh ruined Egypt in all respects, but after they were driven from power, even annihilated, by Mohammed Ali, confidence was restored, a wise government was inaugurated, and Egypt, once

more placed on the highway towards greater prosperity, began to recover its lost population. The unwise rule of Abbas Pasha, from 1849 to 1854, retarded progress, but it was restored under Said Pasha, and has been maintained under Ismail as well as under Thewfik, who has been compelled, however, to subserve foreign aggression more than home development.

The population of Egypt is composed of motley elements—Bedouins; Egyptians proper, embracing Copts, and divided into the "fellaheen" (country population), the "pulad-el-Arab" (town people), and Bedaween (wandering tribes); Nubians, Abyssinians, Soudanese (pure negroes), Turks, Levantines, Jews, Armenians, and Europeans. The fellaheen amount to more than three-fourths of the entire population. This element represents the conquering followers of Ameer, but it has been so mixed with other elements as to have almost lost its identity. The same influence—amalgamation of races—has very nearly destroyed the old Egyptian types, and yet, especially in the rural districts, occasionally are seen to crop out those features which lend a peculiar charm to the chiseled records of a wondrous period and people.

The native populations are a vigorous, well-formed people, noted for gracefulness of carriage as well as for great endurance in labor. Their color ranges from light and tawny, in Northern Egypt, to the deep bronze of Upper Egypt.

The fellaheen are the most patient people of earth, kind in heart, industrious and intelligent, but years of never-ending toil, poorly recompensed, soon change youth into age bowed down with misery. Yet homes of poverty, and almost naked corpses of thousands borne coffinless to desolate graves, awake no sympathetic chords in the hearts of foreign money kings, who dictate through powerful Governments, combined against the weak, what shall be the annual tribute of distressed Egyptians.

The Bedouins are the wandering Arabs, who live in the deserts and in the Sinaitic peninsula. They are of both Asiatic and African origin, and may be properly regarded as descendants of the warrior tribes who founded the dominion of Islam.

The Copts are regarded as the true descendants of the ancient Egyptians, but they are by no means a pure race. They derive their name from Coptos, of Upper Egypt, now Kuft, the headquarters of the Christians till the Mohammedan conquest. The purest Copts are of small stature, like the ancient Egyptians, and many of them have the soft, almond eyes of the ancients. They are better educated than the rest of their countrymen, but on account of religion and inferiority in numbers are looked down upon by the Moslem Egyptians. They number 300,000 to 500,000, living largely in Cairo and in the Fayoom, while several towns and villages of Upper Egypt are almost wholly populated by them.

The Levantines are the Arabic-speaking Christians of Syrian origin. They are mainly engaged in commerce, and many of them are very wealthy. Armenians form an important community, being merchants and traders, while many of them hold important governmental positions. Nubar Pasha, the present prime minister of Egypt, is an Armenian. Jews and Europeans are very important and ever-increasing elements in population. Greeks, Italians, and French, respectively, predominate in making up the European element. The Moslem Egyptians are far more liberal in feeling towards those who disagree with them in religious doctrine than the Mohammedans of any other country.

The last census of population was taken in 1882. The one previous to this was taken in 1877, when the population of Egypt proper was enumerated as follows:

Lower Egypt	2,823,995
Central Egypt	653,119
Upper Egypt	1,471,398
	4,948,512
Cairo	327,462
Alexandria	165,752
Rosetta	16,243
Damietta	32,730
Port Said	3,854
El-Arich	2,506
Ismailia	1,897
Suez	11,327
Suakim	4,600
Massourah	2,740
Total	5,517,626

The census of 1882 shows a total population of 6,806,381. I am satisfied it, as well as that of 1877, falls short of the real population at the time each enumeration was made. Census enumeration of any sort in Egypt is the result of nothing more or less than the declarations of the sheiks, and while these in reference to small communities may be accurate enough, in the large ones they are certainly very inaccurate. No one of observation doubts that the city of Cairo has a population of 500,000, and some think it is nearer 600,000. The census as it is, however, places it far below these figures.

Herewith submitted are the official figures regarding the enumeration of the population in 1882 of Egypt proper:

Moodirieha.	Natives, fixed.		Bedouins.						Total of Egyptians.			Foreigners.			Grand total.		
			Semi-sedentary.		Collected in tribes.		Total.										
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Lower Egypt:																	
Cairo	173, 374	179, 042	445	327	.....	.....	445	327	173, 819	179, 369	353, 188	11, 026	10, 624	21, 650	184, 845	189, 993	374, 838
Alexandria	91, 432	89, 768	263	238	.....	.....	263	238	91, 697	90, 006	181, 703	25, 917	23, 776	49, 693	117, 614	113, 782	231, 396
Damietta	22, 696	20, 805	.....	1	.....	.....	.....	1	22, 696	20, 806	43, 502	78	36	114	22, 774	20, 842	43, 616
Rosetta	10, 632	8, 635	.....	.....	.....	.....	.....	.....	10, 632	8, 635	19, 267	62	49	111	10, 694	8, 648	19, 378
Behera	180, 212	183, 838	4, 054	3, 028	14, 889	11, 181	18, 943	14, 159	199, 155	197, 997	397, 152	1, 114	590	1, 704	200, 269	198, 587	398, 856
Charkieh	214, 344	220, 536	337	216	14, 773	12, 145	15, 110	12, 361	229, 454	232, 897	462, 351	1, 298	506	1, 804	231, 252	233, 403	464, 655
Dakahlieh	287, 432	290, 712	2, 333	2, 051	898	931	5, 231	2, 982	290, 663	293, 694	584, 357	1, 088	588	1, 676	291, 751	294, 282	586, 033
Gharbieh	450, 013	458, 028	893	686	8, 803	8, 518	9, 696	9, 204	459, 709	467, 232	926, 941	1, 737	810	2, 547	461, 446	468, 042	929, 488
Kallioubieh	125, 465	128, 738	497	315	8, 429	7, 455	8, 926	7, 670	134, 391	136, 403	270, 794	414	183	597	134, 805	136, 586	271, 391
Menoufieh	317, 619	324, 990	275	158	1, 046	1, 033	1, 321	1, 191	318, 940	326, 181	645, 121	703	189	892	319, 643	326, 370	646, 013
Isthmus:																	
Port Said and Canal	7, 854	6, 206	176	50	.....	.....	176	50	8, 030	6, 256	14, 286	8, 539	3, 471	7, 010	11, 569	9, 727	21, 296
Suez	5, 275	4, 702	7	1	.....	.....	7	1	5, 282	4, 703	9, 985	693	497	1, 190	5, 975	5, 200	11, 175
East:																	
El-Arish	1, 334	1, 295	182	122	431	556	613	678	1, 947	1, 973	3, 920	2	1	3	1, 949	1, 974	3, 923
Upper Egypt:																	
Kosseir	1, 132	1, 058	142	98	.....	.....	142	98	1, 274	1, 156	2, 430	.....	.....	.....	1, 274	1, 156	2, 430
Assioot	274, 887	274, 889	42	2	6, 151	5, 711	6, 193	5, 713	281, 080	280, 602	561, 682	311	144	455	281, 391	280, 746	562, 137
Beni-Sooef	96, 013	97, 292	762	666	12, 674	11, 997	13, 456	12, 663	109, 469	109, 955	219, 424	111	38	149	109, 580	109, 993	219, 573
Fayoom	100, 345	100, 622	77	58	13, 904	13, 289	13, 981	13, 347	114, 326	113, 909	228, 295	309	105	414	114, 635	114, 074	228, 709
Guizeh	135, 906	138, 500	114	101	5, 121	3, 147	5, 235	3, 248	141, 141	141, 748	282, 889	148	46	194	141, 289	141, 794	283, 083
Minia	146, 635	148, 020	60	19	10, 124	9, 621	10, 184	9, 640	156, 819	157, 660	314, 479	224	105	339	157, 053	157, 765	314, 818
Kaneh	104, 036	117, 777	1, 232	1, 295	6, 313	7, 256	7, 545	8 551	111, 581	126, 328	237, 909	37	15	52	111, 618	126, 343	237, 961
Guergeh	261, 369	254, 603	18	5	2, 653	2, 635	2, 671	2, 640	264, 040	257, 243	521, 283	102	28	130	264, 142	257, 271	521, 413
Keneh	194, 670	189, 149	27	18	12, 240	10, 592	12, 267	10, 610	206, 937	199, 259	406, 696	131	31	162	207, 068	199, 790	406, 858
Oases:																	
Oasis Assioot	10, 638	10, 821	.....	.....	.....	.....	.....	.....	10, 638	10, 821	21, 459	.....	.....	.....	10, 638	10, 821	21, 459
Oasis Fayoom	3, 034	2, 848	.....	.....	.....	.....	.....	.....	3, 034	2, 848	5, 882	.....	.....	.....	3, 034	2, 848	5, 882
Oasis Siwa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	3, 216, 847	3, 252, 969	1, 958	2, 355	118, 449	106, 017	36, 407	115, 372	3, 247, 254	3, 368, 341	6, 715, 495	2, 054	41, 832	90, 886	3, 306, 308	3, 410, 073	6, 806, 381

AGRICULTURE.

That civilization begins and ends with the plow, even fluctuates with the use of the plow, might be adopted as a truism. Certainly, with the adoption of the plow civilization was inaugurated in Egypt, and according as its soil has been cultivated so has its prosperity as a nation fluctuated. The rise and fall of the Nile, and the consequent time to sow and to reap crops, was the origin of mathematical investigation, for which the ancient Egyptians became celebrated. Out of it arose the fixed year—first, twelve lunar months; then, twelve solar months of thirty days each, with five days added at the end of the last month to insure the return of the seasons at fixed periods. Even then error became apparent, and in the course of time the addition of one day to the calendar every four years was a necessity. The year was divided by the ancient Egyptians into three seasons of four months each: the "inundation," corresponding very nearly with the months of July, August, September, and October; the winter, with the months of November, December, January, and February; and the summer, with March, April, May, and June. Modern Egyptians still retain these seasons in their calendars, being known respectively as "*Ed Demeereh*," "*Es Shitawee*," and "*Es Seyfee*." During the first, maize and millet are sown and harvested. During the second, are grown wheat, barley, clover, peas, beans, lentils, vetches, and a great variety of vegetables.

As soon as the inundation of the Nile subsides, and during inundation even, where the land is protected from overflow, planting begins. All the crops now sown, excepting wheat and barley, require four months for harvesting, the excepted requiring seven months. Cotton is planted during the early part of the Egyptian summer and is harvested during the latter part of the season of inundation and in winter. The production of cotton is confined almost entirely to the Delta, where the waters of flood Nile are held under control. Sugar-cane begins to grow early in the summer season, and is harvested in the winter. Rice and indigo are sown in the summer and are harvested in October, November, and December. Tobacco is grown in the summer. Great quantities of melons are grown in the summer, as are cucumbers, of a variety that should never be thrown to the hogs. Of fruits, besides the above, there are grown near the sea great quantities of figs, superb grapes of several varieties in Upper and Lower Egypt, apricots in great abundance, plums of superior quality, peaches in quantity but not very good, dates in great profusion, from the lakes of the south to the sea, for immense home consumption and large shipments to foreign markets. Of vegetables, about every variety known to temperate and to tropical climates are luxuriantly grown in this favored land; they are nearly all in season every month in the year, and it is proper to add, that in quality they are, as a general thing, not surpassed by similar products in any land. Both fruits and vegetables are sold in the markets at very reasonable prices. Oranges are abundant, excellent, and cheap.

In this connection it may not be amiss to give alphabetically the field products of agriculture in Egypt. They are as follows: Beans (*Faba sativa, Dolichos lubia*), barley, cotton, coriander, chick peas, flax, fenugreek, garlic, hemp, henna, indigo, lentils, lupines, lucern, lettuce, maize, millet, onions, peas, poppies, rice, sugar-cane, safflower, sesamum, tobacco, wheat.

The cereals are very largely produced in Upper Egypt, with the exception of rice. Cotton is produced in Lower Egypt. These two di-

visions of the country are subdivided into districts, known as moodiriehs, besides townships or municipalities. The moodiriehs of Upper Egypt are Kosseir, Assioot, Beni-Sooef, Fayoom, Guizeh, Minia, Esneh, Guergeh, Keneh; of Lower Egypt they are Cairo, Alexandria, Damietta, Rosetta, Behera, Charkieh, Dakahlieh, Gharbieh, Kallioubieh, Menoufieh. Besides these there are the divisions of the Isthmus, composed of Port Said and Suez; of the East, composed of El-Arich; and of the Oases, composed of Oasis Assioot, Oasis Fayoom, and Oasis Siwa. The statistics in regard to products are old and necessarily imperfect, but guided by such as they are, I am able to gather the information that the moodiriehs of Gharbieh, and Dakahliah, of Lower Egypt, lead all others in the production of cereals. The largest production of vegetables and farinaceous plants is in the moodiriehs of Ghizeh and Menofieh. Maize (Indian corn) is produced in all the provinces, attaining the maximum, by area, in Assioot, and the minimum in Ghirgeh. The average product, per feddan (5,082 square yards), can only be guessed at; but in the best cultivated fields, because of improper treatment in growth and harvest, the yield is never over 20 bushels. The average, probably, is not more than half this. The grain product is cut short by the use of inferior seed and by the superabundance of plants, grown as much for forage as for grain. Rice proves a more profitable crop than maize. It is produced most largely in the northern provinces. Henna is produced in the moodiriehs of Kalioubieh, Sharkieh, and Esneh; but the crop is not large. Sesamum, an oleaginous plant, is cultivated in many of the moodiriehs; but the entire crop is also small. Indigo is not largely produced, and yet it has been demonstrated that profit from its production may be very great. The average income per feddan is put at about $55, and yet the most intelligent cultivation and treatment of this plant have yielded a gross return of $140 per feddan. Tobacco has not been very largely cultivated in Egypt, and yet the profit from its production in some of the provinces has been good. The average gross return, per feddan, may be placed at $36, while in the moodirieh of Esneh the maximum of yield has been as high as $60. The area of the crop of 1886 was about 15,000 feddans throughout entire Egypt. With improved seeds I think the value of this product might be greatly enhanced. Barley is a very important crop, and is mainly cultivated in the northern provinces; yet it is not as profitable a product as maize. Beans, which are generally cultivated, yield a crop annually about as valuable as barley—about $2,250,000 each. The value of the lucerne crop is annually about $15,000,000, while that of the wheat crop is about $13,000,000. The lucerne crop is consumed in Egypt in the feeding of live stock, while wheat is largely shipped for foreign consumption. The annual product of maize is about $5,000,000. Sugar-cane is cultivated throughout Egypt, but most largely in the province of Munieh. Next in the production of cane come Assioot and Esneh. This crop, owing to the advantages of irrigation and the fitness of the climate for its production, is very uniform. The gross return per feddan may be put at an average of $50. The Government quite controls the manufacture of sugar, and, it may be said, because of its low price at present its manufacture is at this time unattended with profit.

An idea of the movement in wheat and beans may be derived from the following tables, based upon transactions at Alexandria, where almost the total shipments of these two products are made:

Reported receipts and shipments at Minetel-Bassal from April 1 to December 18 in ardebs.

[About 5 English bushels make an ardeb.]

Articles.	1883–'84.	1884–'85.	1885–'86.	1886–'87.
Wheat:				
Receipts	694,790	458,490	181,490	204,870
Shipments	584,140	516,180	.....	.....
Beans:				
Receipts	832,980	973,180	879,590	562,680
Shipments	882,110	1,011,710	905,680	451,880

It may be proper to note that shipments for the present season are not completed.

The above figures suffice to give an idea of the importance of Egyptian agriculture in connection with foreign supply. The wheat and bean crops of 1886 have been fully up to the average.

COTTON.

The production of cotton in Egypt received an impetus from the war of sections in the United States. But little of the staple was produced prior to the time when the trade of ports in the cotton-growing States was cut off by blockade. Egyptians then began to bend their energies to supply, as far as lay in their power, some of the deficit from that quarter of the globe where cotton had been proclaimed "King." One dollar a pound was a great incentive, and the cultivation of cotton in the Nile Valley became general. Appreciation of our great family trouble is still manifested by Egyptians, when they often inquire with zealous interest if we will not have another war in America. Certainly these people were temporarily very greatly benefited by the American conflict, but I am generous enough to say they do not desire us to again engage in fratricidal strife; that they simply hope for more remunerative prices for their products.

Cotton planting is done in the early summer season (Egyptian calendar). The fields are first well saturated with water raised from the canals and ditches, and, after being dried off to a proper condition for plowing, the soil is well broken with the plow. Ridges are then formed, mostly with the hand-hoe, about 3 feet wide, horizontally across the fields. The seed are then carefully planted by hand along the same side of every ridge. Then more water is turned into the water-furrows to insure ready vegetation of the seeds, and in a few days the young plants are above ground, forming distinct horizontal rows of cotton plants far down on the same side of every ridge. The crop is not cultivated with the plow, but with the hand-hoe; and here the utility of planting on the side of the ridges comes into play, the process of cultivation being nothing more than a thinning of the plants to a proper stand, and dragging the ridge in successive workings towards the plants. Thus, when cultivation is finally over, the position of the ridges has been changed, so as to leave the plants along their centers, with the water-furrows equidistant between the rows of cotton plants. The general rule among cultivators is to water or to saturate the fields eight times during cultivation. This gives the soil a thorough wetting once in about every two weeks, which is by no means beneficial to crop production. The cotton plant is known to be grown to best advantage where moderate rains fall. It is damaged by too much moisture, and in a warm

climate, under the influence of much moisture, produces weed greatly to the exclusion of lint. The Egyptians grow their cotton plants too thickly, and, by pushing the growth with moisture, destroy fruitage, which, under more congenial conditions, would be more largely produced and preserved. The clean-seed varieties of cotton are altogether used, and once the staple was much better than now. New seeds are needed, and more intelligent cultivation, and though the preference here is for the clean-seed varieties, I believe the more prolific of those varieties usually cultivated in the cotton-producing States of America would pay far better than those now grown in Egypt. One drawback to the change would be that all the gins now in use in this country are manufactured exclusively for the clean-seed varieties.

Cotton statistics in Egypt are very much like statistics touching anything else here. They are guess-work, and when applied for, even in proper quarters, are next thing to an impossibility to obtain. Some months ago I applied through the ministry of foreign affairs for statistics on various subjects without any satisfactory returns. Then I applied to the director of customs, and my success in that quarter was far from satisfactory. Regarding cotton statistics, I am left almost wholly to my own individual exertions to procure points of interest necessary in a report like this. My application for statistics regarding cotton production made through the office of foreign affairs and a subsequent one made to the director of customs secured me nothing of value. Statistics are in their earliest infancy in Egypt, and a show of figures from here may, as a general thing, be set down as guess-work. Such figures have been sent from Egypt; but they are in reality not fully reliable. Monetary figures and reports are profuse enough. The Government issues great volumes of these, but I am not prepared to say they are not doctored in profuse doses. Such figures and reports are minute in regard to all receipts and expenditures of all departments of Government, of all systems in operation under direction of Government, but strangely wrought balances often appear. But, touching products of the country, agriculture, live stock, &c., figures are almost wholly guess-work. A beginning, however, has been made for 1886 in regard to cotton culture, and from it I am enabled to present what follows.

Lower Egypt, composed of the moodiriehs of Behireh, Charkieh, Dakahlieh, Gharbieh, Kalioubieh, and Menoufieh is the great cotton-producing region of the Nile country.

Agricultural statistics of Lower Egypt.

[1 1/19 acres = 1 feddan.]

Moodiriehs.	Total area in cultivation.	Area in cotton.	Number employed.*
	Feddans. †	*Feddans.*	
Behereh	465, 610	110, 763	264, 297
Clarkieh	434, 362	132, 820	320, 444
Dakolieh	462, 366	157, 727	399, 555
Gharbieh	838, 980	275, 125	653, 800
Kalioubieh	187, 179	37, 226	178, 426
Menoufieh	351, 710	111, 453	465, 461
Total	2, 281, 985	826, 114	2, 281, 985

* Lower Egpyt is the great cotton-producing region of the Nile.
† Employed consist of both sexes; the percentage of population thus employed being 69.85.

Agricultural statistics of Upper Egypt.

Provinces.	Total area in cultivation.	Area in cotton.*	Number employed.*
	Feddans.	*Feddans.*	
Beni-Soeuf	221, 610	9, 982	165, 426
Guizeh	181, 175	1, 317	182, 689
Fayoom	230, 110	35, 088	144, 884
Minnieh	397, 240	2, 134	229, 798
Assioot	419, 099	5	360, 066
Guerget	325, 914	25	353, 438
Keneh	290, 927	.....	296, 794
Esnet	150, 459	....	185, 645
Total	2, 216, 537	.....	1, 917, 687

* 2.24 per cent. of population only were engaged in cotton culture.

The cotton crop of 1886 will not far exceed 400,000 bales, while that of 1885 was 574,320 (United States standard). The crop will be wholly ready for market by the end of January.

The cotton crops of five years are as follows, in cantars (100 pounds):

1881–'82	2, 900, 000
1882–'83	2, 860, 000
1883–'84	2, 700, 000
1884–'85	3, 630, 000
1885–'86	2, 871, 600

About two-thirds of the shipments of cotton are to England; one-third to various European continental ports.

The maketable crop of cotton seed for a series of years is as follows, in ardebs (1 ardeb=nearly 5 bushels):

1881–'82	2, 045, 600
1882–'83	1, 662, 430
1883–'84	1, 918, 200
1884–'85	2, 536, 460
1885–'86	1, 973, 850

LAND TAXES.

In one of the accompanying tables it will be seen how enormous is the land tax of Egypt. The area of Egypt, not inclusive of desert, is about 5,750,000 feddans. Of cultivated lands there are 4,956,748, with an agricultural population of 4,199,672. The land not in cultivation is absolutely non-productive, lacking either irrigation or being sea-coast marsh. Therefore agriculture pays the land taxes, which range from about $4 to $8 per feddan. No wonder, therefore, may be expressed why the people engaged in agriculture remain very poor. About three-fourths of the cultivated lands of Egypt are known as "Kharaji" lands, the remainder as "Ouchouri" lands. The latter are certain privileged areas, paying a lower rate of taxation than the other lands, the rate on these lands being a little over $2.50. The "Ouchouri" lands arise from grants of land, not then subject to irrigation, made by Mohammed Ali as supplemental gifts to his followers who were granted farms. These supplemental gifts were made on the ground that the grantee would bring the desert tract into cultivation. The reclamation and watering of these tracts being attended with great expense, the Government has assessed them for lighter taxes than have been imposed

upon the other lands. The "Kharaji" lands pay the heavy taxes above named, and are the lands subject to easy irrigation, which is provided by the Government. It may therefore be said in extenuation of this enormous taxation, that the Government is subjected to enormous expense in making lands productive of crops. They are taxed in accordance with the facilities provided by the Government for easy or difficult irrigation. In the Delta, rotation in crops presents relief from heavy taxation; but in Upper Egypt the tax is onerous in the extreme.

A serious feature of the land tax is, that taxes have been and are still unfairly distributed, the areas as recorded on the registers being inaccurate. They were first surveyed under Mohammed Ali, in 1813, and the surveyors engaged in the work were often paid by the rich to make false returns, by which they were relieved from the proper proportion of taxation. Since then, too, areas have been washed away by Nile floods; lands have been taken for canals, dikes, and railways; and taxation has not been revised in a manner to relieve many from paying taxes upon what they really do not own, from paying upon estate which has absolutely been taken for public purposes. The cadaster is the land-survey department of the Egyptian Government. Under late surveys, made through cadastral direction, this evil has been partially corrected, and the work will probably go on until in a great measure substantial justice will be exercised. Under this revision it is recorded that alone in the two districts of Kafr-el-Zayet and Saman, out of a total of 914 tenanters of the soil, 185 holders paid no taxes, while 699 paid taxes on land in excess of what they owned.

A more evil feature of land taxation probably than what is above referred to is unequal valuation of the holdings which are classified for assessment. In Europe and in America lands are valued according to quality, convenience to market, and adaptability to uses. In Egypt advantages of irrigation should play a most important part in valuation, but in reality none of all the conditions enumerated have been properly considered. The result has been the exercise of great injustice and the creation of most proper and wide-spread dissatisfaction among the agricultural classes. Overcropping has very materially impaired the fertility of soils, and this, added to scarcity of water-supply in many sections, has very generally reduced the values of lands, and changes in assessments from those fixed in former years have not been made to keep pace with alteration in values. (See table of budgetary receipts.)

The cadastral survey was begun in 1879 and it has slowly progressed since then, while correction of the village land registers under its operation has been quite as slow. Still, the work moves, and in Egypt this may be counted as well enough. In the course of time evils will be corrected, but the period of execution may be so protracted as to allow equally as great ones to grow up under proposed correction.

AGRICULTURAL TAXES.

All exported products of agriculture pay an ad valorem tax of 8 per cent., the fixed rate of duty on all exports as well as imports. Besides this contribution from agriculture for the sustenance of the General Government, there are certain special taxes imposed upon products of the soil and upon live stock nurtured thereby. I have been able to procure no late returns upon these items of taxation, and therefore am

compelled to present that of 1883, which, however, indicate very nearly what the present tax is. The showing was as follows:

	Turkish pounds.
Date tax	8,447,900
Dates on oases	443,000
Extraordinary tax on land watered by Ibrahimmeh Canal	3,299,300
Taxes on tobacco and tumbac (local)	3,635,500
Taxes on wells	299,900
Taxes on siva	203,000
Taxes on sheep and goats	3,656,100
Total	18,974,700

Live stock not above mentioned is taxed only when marketed.

IRRIGATION.

Nothing is so interesting to me in Egypt as irrigation. Were it not, in fact, for irrigation, there would never have been an historical, a scientific, a classical Egypt. God granted it natural irrigation, and this, aided by artificial works, once gave to Egypt a material existence as grand as its monuments are enduring. Since it is due alone to the employment of the waters of the Nile that agriculture is known in Egypt, and since agriculture is the base of all wealth here, it must be deduced, the wealth of old Egypt being far greater than that of the Egypt of to-day, that these waters were once more widely employed; that they were made to feed the crops of more extended agricultural districts. History as well as the silent evidences of the past proves this, and evidences of to-day begin to show a broader and growing conception of the value of irrigation. The spirit of advancement in this direction was evidenced in the works of Mohammed Ali, in the Barrage and in the grand canals he opened. Ismail Pasha also pushed with great vigor schemes of irrigation; and Thewfik is lending all the aid he can towards their enlargement.

The curious historical and scientific researches of a citizen of the United States have unfolded a huge plan of irrigation, known to the ancients, and the present Egyptian Government at this time seems disposed, after at first turning a deaf ear to his propositions, to profit by this man's philosophy. The darkness which spread over Egypt in the Byzantine period, and which grew denser still under the supremacy of the Mamelukes, was dispelled by Mohammed Ali, and, unless foreign power again re-establishes decay, it may be expected that in a few generations it will be entirely dispelled.

The processes of irrigation are, I am satisfied, just about as they were thousands of years ago. Partial use of steam power has created slight changes, but the shadoof and the sakeeyek are yet almost supreme, and, in fact, as they are worked, it may be said they have no superior.

The shadoof is made of two posts about five feet high, set into the earth three feet apart and joined at the tops by a horizontal bar. Across this bar is slung a pole or a branch of a tree, having at one end a weight composed of mud, and at the other, suspended by two palm stalks, a bucket made of basket-work, or matting, or of a hoop with woolen stuff or leather. This is worked by one man, who is able with its use to raise water about eight feet. • Where it is necessary to raise water to a greater height, two or more of these machines are employed. Appliances of a similar nature for lifting water from wells are common in North Carolina, and are very often seen in other parts of the United States. One

Egyptian with the aid of this machine elevates a marvelous quantity of water. Often the shadoof is double, when it is worked by two men, with a corresponding increase in the elevation of water.

The sakeeyeh is a vertical wheel, often thirty feet in diameter, with earthen pots attached by cords to its circumference, another small vertical wheel with cogs fixed to the same axis, and a large horizontal cogged wheel, which, turned by one or two buffaloes, cows or other animals, sets the other two wheels in motion, thus raising the water by means of the pots. These machines are largely used in Lower Egypt, along the river banks, and on the margins of the canals and ditches, where a single shadoof or sakeeyeh does the work of elevation. In Upper Egypt, where the land is much more elevated, two, and often more machines, one above the other, are employed.

In the lower Delta, where the elevation of the cultivated soil is very slight, a modification of the sakeeyeh, called the taboot, is much used. It is a very light, easily moved wheel, with hollow fellies instead of pots, and it is turned by the hand of a man. Many of the water-wheels in the Fayoom, one of the richest provinces of Egypt, are often so contrived as to be moved by the weight of the water itself.

The cultivated fields are divided into squares of raised ridges of soil, and into these squares the water is admitted, one after another, until the entire field proposed to be irrigated is saturated. The Egyptian agriculturist is satisfied with nothing less than thorough saturation of the soil when he concludes to water his crops. Cotton and sometimes other growing crops are seriously injured by this excessive process. The busiest season of the year with the water is during highest Nile—September and October—when vast areas of land are inundated, after the long, hot summer, preparatory to sowing the fields in wheat, oats, barley, and clover. The lands are then inundated, and afterwards dried off by turning the water away until they reach a superb condition for plowing, when they are broken up with plows. The grain is sown in every furrow as the breaking process goes on, and then the square ridges in the soil, referred to above, are prepared to admit of subsequent systematic irrigation of crops. The water from the irrigating-machines is conveyed to different portions of the fields by means of gutters (raised channels formed in the soil), out of which it is admitted to the numerous little squares which checker the fields.

In studying irrigation in Egypt my mind constantly wanders back to my own country, where, especially in the Southwest, untold benefits might be derived from the very same processes which enabled Joseph to sell corn to his brethren of adjacent drought-stricken lands. The effect of fearful droughts in many parts of the United States might be greatly lessened by a proper employment of the water of rivers in sustaining growing crops. In Egypt irrigation may be studied to greatest advantage; and, though the first impulse is to laugh at methods employed, in the end one regards them as most effective and very cheap.

THE BARRAGE.

Mohammed Ali had the credit of beginning this great work in 1847, under the advice and direction of the French engineer, M. Mougel Bey. It is situated 12 miles below the city of Cairo, at the point where the Nile begins to form its delta, the waters flowing thence onward to the sea through channels, reaching it at Damietta and at Rosetta. The Barrage is the most gigantic work of irrigation known to modern times, its object being to hold up the waters of the great river during its ebb

tide of about eight months, so as to supply water in the canals and ditches of the Delta on a level with the cultivated soil. In an economic light it was calculated that this superb work would, as a return for the enormous sums of money required in its construction, do away with thousands of sakeeyehs and shadoofs, the working of which required a vast expenditure of human and animal energy that could be more profitably employed in planting crops and cultivating the soil. In addition to this it was known that successful inauguration of this new plan of irrigation would change wide wastes into most profitable farming districts, and that, while thus bettering the material condition of Egypt, her revenues would be much augmented. It took a master mind like that of Mohammed Ali to see conditions arising from so great a work. It took base intrigue and petty jealousy to deny for many years the feasibility of such a conception of genius.

Not long ago I visited the Barrage. It is a work of huge proportions, stretching across the two branches of the Nile, and across the head of the Delta lying between them. To form a conception of this work, imagine the Mississippi River dividing at New Orleans into two channels, with these two passages obstructed by a great weir of the most substantial masonry planted across the bed of each stream, possessing such mechanical appliances as would readily raise the waters of a low river to that of one in full flood, so as to spread them over the lands of the Delta as food in needy seasons to hungry vegetation. Think of such a structure, broad, massive, deep, resting upon an alluvial bed of mud, but as solid as the hills, with a power to raise water to a proper height for irrigating the plantations of lower Louisiana, and you will understand the value of the Barrage in a country where rain is almost unknown.

To give a view of the Barrage from an architectural standpoint would require more space than would be justifiable in this report. But I may be permitted to say that its appearance is not only very beautiful, with noble front and a grand general effect, produced by the long lines of massive arches, with crenelated towers and turrets, but its evident solidity is suggestive of its having been put there, like the Pyramids which rise in the distance, to stay. It is a monument to modern Egyptian genius, almost as grand as the massive pile of stone which marks the spot where once reposed the mortal remains of King Cheops.

Through the arches of the Barrage flow the waters of the Nile; and across these massive gateways water-barriers are adjusted, to dam the flow of the river until its swell fills the canal, which is opened into the Delta between the Damietta and Rosetta branches of the great river. The width of the Damietta branch is 543 meters, and at high Nile there pass through it 4,738½ cubic meters of water per second, the mean velocity being one meter per second. The Rosetta branch is 464 meters wide, and at high Nile there pass through it 4,738¼ cubic meters per second, the mean velocity being 1.70. The arches over the two streams are, respectively, 72 and 62, each one having a span of 16 feet. Besides the long lines of masonry, extensive and massive earthworks extend far out on each side and across the head of the Delta. The intention of the Barrage was a great dam for irrigating purposes, and to it was added a military feature, the point where it is built being regarded as a position of great importance in defense of the Egyptian capital. The canal, which is intended to convey water into the Delta for irrigation, follows the course of an extinct channel of the Nile, known among the ancients as the Sebennytic branch. Herodotus mentions the three great branches of the river, and so does Strabo.

The ancient Egyptians utilized the waters of the Nile for irrigation to a greater degree than the Egyptians of to-day. They put into practical operation measures only dreamed of at this time, for many of the channel-ways of some of the old canals are now wholly unknown. The ancients cultivated more soil than the moderns; they produced greater crops; they were possessed of greater wealth. One ancient Egyptian king had more money in his private vaults than is now contributed in a twelvemonth to the entire Egyptian Government. The great wealth of old was derived from proper distribution and utilization of the waters of the Nile, and it is to the resolution of this subject that moderns must address themselves if they would free Egypt from the oppressions of the European bondholders. Mohammed Ali inaugurated a new Nile era. Had he lived till now Egypt would have been one of the very greatest nations of the East. It would have been re-enthronged in grandeur and riches. The Barrage has been at last put into practical operation with great beneficial effects, but this is only the beginning of what may be done.

Egypt has prospered best under its untrammeled native rulers. Foreign intervention has always crippled and dwarfed its efforts. Thewfik Pasha has no voice of his own, and cannot dictate measures of advancement as long as foreigners control public moneys purely for foreign gain.

A GRAND SCHEME.

Under the head of "irrigation" reference was made to a huge plan of irrigation unfolded by an American. When Herodotus visited Egypt, B. C. 454, he enumerated various great monuments and public works. Among these he included the Pyramids, but to them he failed to give so great prominence as was given to a vast artificial reservoir, which, in his own words, "excelled all other human productions." "The circuit of its coast," said the historian, "is sixty schoenes, or three thousand six hundred furlongs, which is equal to the entire length of the sea-coast of the Delta. It stretches in its longest direction from north to south, and in its deepest parts is of the depth of fifty fathoms. The water of the lake does not come out of the ground, which is here excessively dry, but is introduced by a canal from the Nile. The current sets for six months into the lake from the river, and for the next six months into the river from the lake. While it runs outward it returns a talent of silver [about $1,060] daily to the royal treasury from the fish that are taken in the canal, but when the current is the other way the return sinks to one-third of that sum."

The Ionian historian was careful to repeat the measurements in such a way as to avoid any possibility of error on the part of his copyist. The circumference of the lake was given by the schoene, an Egyptian unit of length, a day's tow, and could be compared to the distance which separates Alexandria from Port Said. He took pains to insert, that the furlong was a hundred fathoms, or six hundred feet. The depth, also, he repeated, is one-half of a hundred fathoms, or half a furlong. About five centuries later Diodorus from Sicily, Strabo from Asia Minor, Mutianus and Pliny from Rome repeat what was evidently a wide belief regarding a well-ascertained fact.

Diodorus said the utility of the lake deserved the highest praise, and its greatness was incredible. "Considering," he said, "the benefit and advantage brought to the Government by this great work, none could ever sufficiently extol it according to what the truth of the thing deserved." He explained in lucid terms its unique character. "For,

since the Nile does not attain a uniform and regular height in its inundation, and the fruitfulness of the country depends upon a proper distribution of the water, this lake was formed so as to receive the surplus water, so that it might not drown the land and produce marshes and standing ponds; nor yet, by flowing too little, prejudice the fruits of the earth for want of water. Therefore, a canal was made eighty furlongs in length and three hundred feet broad. Into this they let the water of the river sometimes run, and at other times diverted it and turned it over the cultivable land, at proper seasons, by means of sluices, which were opened and closed not without great labor and cost, for they could not be opened or shut at a less annual charge than fifty talents." These sluices were probably constructed on the system which now prevails in Egypt. The canal or basin was closed by a mound of earth, and opened by cutting the dike.

Diodorus wrote that this lake continued to benefit the Egyptians of his day.

Strabo, who lived about the beginning of the Christian era, was equally unstinted in praise of the "wonderful Lake Mœris, which in extent is a sea, and the color of its waters resembles a sea. Its borders, also, are like the sea-shore. It is able, by its area and depth, to contain the excess of water which flows into it at the time of the rise of the river, without overflowing the inhabited and cultivated parts of the country. On the decrease of the water of the river it distributes the excess of the same canal at each of the mouths, and both the lake and the canal preserve a remainder, which is used for irrigation.

Pliny (A. D. 47) placed this great reservoir 62 miles from Memphis, or 77 miles from where the Nile divided its waters for the formation of its Delta.

None of the ancient writers disputed the accuracy of these statements, and Claudius Ptolemy, the Alexandrian geographer in the second century, gives the latitude and longitude of two places on Lake Mœris, while a series of maps accompanying his text represent a large body of water in the desert to the south of what is now known as the Fayoom. Yet with all this evidence the story of the lake has been rejected by nearly all Egyptologists.

Convinced that there was more in the declarations of the ancients than the moderns gave credit to, Mr. Cope Whitehouse, who came to me a year ago with a letter of introduction from Mr. Bayard, Secretary of State, bespeaking my friendly offices, remained a short time in Egypt in the winter of 1880. Impressed as to the existence of the ancient body of water, Mr. Whitehouse spent the succeeding twelve months in careful investigation of Greek, Latin, Arabic, and hieroglyphic memorials, and as a result he became more convinced than ever of the existence of a great artificial reservoir in Egypt, the destruction of which, about the third century, had ruined a large part of the productive area of the country. His scholarly investigations were submitted to men prominent in the scientific world, with but little or no encouragement. In the early part of 1882, however, he went into the desert, south of the Fayoom, almost alone, and found a valley corresponding in shape, depth, and position to the assumed ancient basin, which he had already, as a result of his studies, sketched on his own maps. In 1883 he again visited Egypt and again renewed his surveys in the desert, his researches having now been warmly approved by scientific and geographical men of the New as well as of the Old World. A year ago Mr. Whitehouse came again to Egypt and spent several months here. I saw him a number of times

and conversed with him freely, and encouraged him in words, regarding his most interesting researches and explorations. In January last he was in the field, and about the same time Dr. Schweinfürth, a learned German geographer, spent some time examining the depression outlined by the American as the site of the great ancient reservoir.

In February the Egyptian Government detailed an engineer and staff to run an accurate line of levels, the result showing that there is a depression, sinking to a depth of 250 to 300 feet below high Nile, 92 kilometers in length and 31 kilometers at its greatest breadth. It would require a canal of about eleven miles to connect this basin with the Nile. It is held that through this canal water from high Nile could be made to flow in such quantity as would in a few years fill up this great depression and change it from dry desert into a great fresh-water lake. Once filled, it could be converted to the uses of irrigation. The swell of the Nile would annually fill the lake to the level of high Nile, and during low Nile this reserved water could be liberated and sent to the low lands, to contribute, without so much human toil, to the production of crops. So was the ancient Mœris utilized; so may the modern production of American thought and investigation be made to contribute to the wealth of a reinvigorated Egypt. It is held that 5,000,000,000 cubic meters of water may thus be stored in three months to meet the demand during low Nile. Not only is it held that water may be thus stored to satisfy want, but that the great reservoir would, during flood Nile, by the reception of surplus water, protect great areas from ruinous inundations; that great marshes would thus be reclaimed and converted to the use of agriculture; that the expensiveness of irrigation on a larger scale would be greatly reduced; that happy climatic changes would be brought about. At last, sufficiently impressed with the matter, the Egyptian Government is manifesting deeper interest in the scheme of Mr. Whitehouse. Heretofore he has spent only his own money in investigation and exploration; now the Government is beginning to give him substantial aid.

I take much interest in this question for more reasons than one. I desire to see the material condition of Egypt bettered, for it sadly needs bettering. I desire to see the scholarly efforts and the persistent researches of one of my countrymen succeed; to see American mind do good as a counterbalance to harm done by European armies. I hope to see the storing of the surplus waters of the Nile suggest to the American mind the propriety of storing the waters of the Missouri River within great mountain basins, so that the interests of the Mississippi Valley may be protected against devastating floods sweeping down from the Northwest. Here is a problem of benefit to the Nile Valley bearing directly upon industry in one of the greatest agricultural regions of the United States.

RAILWAYS.

The first railway built in Egypt was that between Alexandria and Cairo, in 1845. Its purpose, besides connecting the two great cities of Egypt, was to form part of the railway line between Alexandria and Suez, now partially disused because of the opening of the great interoceanic canal across the Isthmus of Suez. The railway system has now been considerably extended, so that it embraces connections between all important points in the Delta as well as between Cairo and the Fayoom and Assioot. Owing to the level country, railway building has been comparatively inexpensive, though it may be added that construction

has been good. There are no viaducts, tunnels, &c., and only two very expensive bridges, which span the two branches of the Nile on the Alexandria-Cairo line.

The mode of construction is in raised earthen road-beds only a few feet high, upon which are laid cast-iron chairs resembling huge overturned saucers, separated by transverse round bars firmly fastened to the chairs. Two chairs thus connected form the parallel ties and the rests for the rails, and the iron way thus formed is as solid and substantial as though laid upon live-oak ties firmly ballasted in rock. Formerly nearly all the employés on the railway lines were foreigners, but now they are mostly natives. Railway administration is in the hands of a commission, which, in stipulations, it was agreed should be composed of two foreigners and one native, the latter a Mussulman as well. So it was composed until very lately, when charges were trumped up, as many believe, against the native for insulting a bailiff intrusted with service upon him. On a charge of contempt of court the official was arrested, tried, convicted, fined heavily, and sentenced, besides, to six months' imprisonment. Of course his degradation removed him from the administration, and his place was given to an Armenian, a foreigner himself and devoted to foreign influence. The administration is not good, and as a consequence the Egyptian Government, which owns the railways, does not receive such remuneration for their operation as is justified by the business of transportation.

The railway lines of Egypt present a total of 1,247 miles. Divided into districts, as operated under their administration, the following table may be presented:

Districts.	Single lines.			Sidings.			Total single lines and sidings.		
	Miles.	Chains.	Links.	Miles.	Chains.	Links.	Miles.	Chains.	Links.
First	173	20	.....	25	63	21	199	3	21
Second	123	40	.....	38	20	60	171	60	60
	48	60	.....	4	39	20	53	19	20
Third	160	40	.....	13	49	80	174	9	80
Fourth	256	20	.....	20	21	33	276	41	33
Fifth	167	20	.....	14	45	32	181	65	32
Sixth	177	60	.....	12	66	95	190	46	95
	1,117	20	.....	129	66	41	1,247	6	41

INDUSTRY.

This subject belongs more to agriculture than to anything else, which has been reviewed as extensively as is admissible in this report under its distinct consideration. The bulk of population, it has been shown, is engaged in working the soil.

Sugar.—Production of sugar may be regarded as one of the newest industries of Egypt. The Government took hold of this enterprise under the administration of Ismail Pasha, and its outlay was so great as to have made returns inadequate to investments. While profits from sugar production have not been very encouraging, the fault does not lie in the quality of the product. Not only is the Egyptian sugar-cane as fine as I have ever seen in the United States, in the West Indies, or in South America, but the sugar made from it has, in my opinion, no superior.

While refined sugars are not made at the mills in the planting districts, the unrefined article comes nearer refinement than any crude production of sugar I have ever observed; and I have been at mills in many parts of the world.

The Egyptian sugar is of the clearest amber color, with large crystallizations, perfectly dry when it comes from the mills. In taste it is as purely refined as the best East India loaf sugar, lacking refinement in its crude state only in color, which, however, is truly beautiful.

There are over twenty sugar mills or manufactories in Egypt, most of them in the province of Minieh, in Upper Egypt. It was the purpose of the Egyptian Government to largely encourage the production of sugar-cane in the Soudan, but Egyptian influence, as you know, has been suspended in that part of Africa.

Paper.—Ismail Pasha built a splendid paper-mill at Boolak, and the manufacture of paper was carried on there upon a large scale. The finest papers were being manufactured, but foreign intervention drove Ismail from Egypt, and the paper-mill was closed, and England continues to supply Egypt with most of its paper. The machinery of the immense Boolak mill is lying idle and is being destroyed by rust. Observation convinces me that Yankee energy could be profitably directed not only in the manufacture of paper in Egypt, but that first-class manufactories in the United States might fill large orders for papers in Egypt. The Egyptian Government consumes a vast amount of paper of the best quality, and it pays high prices for it. There is at present no prospect of paper manufacture being resumed in Egypt.

Printings.—There are quite a number of printing establishments in Cairo and in Alexandria. A number of newspapers are printed in Arabic, and others in French, English, Italian, German, and Greek. The Government grants permits for the publication of newspapers and periodicals and reserves the right to suspend their publication for cause. The noted case of the *Bosphore Egyptien* was taken into the mixed courts and judgment against the Government for suspension was fixed at 125,000 francs. One or two other papers have been suspended within the last twelve months, one an Arabic journal, on the complaint of the Sultan's high commissioner in Egypt, on asserted disrespect for the Porte and its commissioner. The Government has its own printing department at Cairo, and the work turned out of it is magnificent in execution.

Natron and salt.—Large quantities of natron and salt are found in different parts of the valley of the Nile, and their extraction from the soil gives employment to a considerable number of people.

The quarrying of stone and the making of lime are both important industries. The Government keeps a large number of convicts at work in quarries.

Fishing.—Fishing is an important industry, and the Government receives therefrom a variable annual revenue.

In another part of this report reference is made to the very important industry of artificial egg-hatching. The oven crop of chickens annually is placed at from 10,000,000 to 12,000,000 of the feathered tribe.

Miscellaneous.—Some very substantial and most durable woolen goods are manufactured in Egypt; also silk and cotton stuffs. The dyeing of cloths is also quite an industry. Besides, great quantities of pottery are manufactured, some of it very beautiful. Egyptian brass-work is a leading industry, and the ornamental brass work is justly celebrated because of its beauty. Gold and silver embroidery and lace are largely produced, and Egyptian gold and silver jewelry is made in great quanti-

ties. Every woman in Egypt, rich and poor alike, strains a point to invest in jewelry, composed of standard metal inspected by the Government. Ornamental wood-work is another important industry. Furniture made in the arabesque style is greatly used, and quantities of it are taken every year by travelers to send to their homes in Europe and in America. Great numbers of articles are made of the trunk, branches, and leaves of palm trees, such as seats, bed-frames, chests, baskets, mats, brooms, and ropes. There is also much distillation of scents and essences. The ginning of cotton is a necessary adjunct of cotton production. It is not done by the producers of cotton, but in large establishments, in the cities and towns, from which transportation is easy. The cotton in the seed is taken to the "factories," as the ginning establishments are called, and in these the product is prepared and baled for market. The gathering, preparation, and baling of rags for market is quite an important industry, giving employment to a good many people. The manufacture of antiquities is one of the minor industries, patronized by the uninitiated traveler.

The Egyptians display the most wonderful tact in all industrial arts. They are possessed of great capability, subject to any degree of expansion.

ANIMAL INDUSTRY.

Of domestic animals in Egypt, the principal are, the camel, the horse, the donkey, and mule; the cow and the buffalo; sheep, goats, hogs, dogs, and cats. Of the camel, the buffalo, and the horse, it would appear the ancient Egyptians knew nothing, since representations of none of them appear in the older records; and this is also true as to the sheep. No traces of the existence of the horse appear in Egypt until after the return of Thothmes III from his Asiatic conquests. Even at this day the horse is not much used in the country among agriculturists, but is mostly confined to use in the cities and larger towns. The camel and the ass are at present necessary component elements in the material condition of Egypt. The camel is used to ride, to bear heavy burdens, to draw the plow, and to raise water for irrigation; the ass is used to ride, to bear heavy burdens, and is an ever-present, patient creature, ready for any task. Camels and asses move the entire industrial production of Egypt. All the products of agriculture are taken from the fields to the villages and the distant markets on the backs of camels and asses. The two seem to be as indispensable to agriculture as are the waters of the Nile.

There are two varieties of camel in common use—the heavy beast of burden and the graceful riding animal, with a speed and movement as brisk and smooth as the wind; the former valued at from £5 to £10, the latter, according to style and training, at from £15 to £30.

The common ass sells at almost any figure; but there is a royal white breed, used for riding-animals, single specimens of which have been known to sell as high as £200, while £100 is a very common price. This breed of donkeys are bred in their greatest purity about Mecca, and the Arabs who rear them never sell a female. Only the males are marketable, and many of these are brought to Egypt and sold to the rich at the high prices named. The best specimens are not over 14 hands high, but they are creatures of the proudest carriage, swift, and most graceful pacers. They display the most royal air, and justly, too, for many of them, it is said, have pedigrees antedating the beginning of the Mohammedan, or even the Christian, era. Their vigor is maintained to a great age. The cow and the ox, now in general use throughout

Egypt, are identical with animals, figures of which appear in the ancient records. The breed seems coexistent with the being of man in the valley of the Nile. This cow possesses most valuable qualities as a milker, and works patiently at the water-wheel, and even at the plow. The ox is raised for toil in the fields and for the production of meat. The very great similarity between the Egyptian cow and the Jersey cow suggests to my mind that the latter was probably originally introduced from the East. The Egyptian cow possesses the same form, with its graces, that belongs to the Jersey, the only perceptible difference being in the neck, which is not so delicate as that of the Jersey, while the horns are far more diminutive. The color is generally dark red, with brown or black points. The milk is very rich in oil, and the butter made from it is of a deep yellow color.

The buffalo (African) is largely produced, and is kept for the same purposes as the cow and the ox. The males are generally marketed while young, for veal, or, when a little older, for beef. The cows grow to a huge size, great glossy black, almost hairless beasts, of angular parts; and they are very largely used, not only for the production of milk and butter, but in consequence of their great power and endurance as beasts of labor. They draw the plows, move the water-wheels, and carry burdens. They are semi-amphibious in nature. It is a novel sight to see droves of them sporting in the waters of the Nile and of the canals. They sport as joyously in the water as seals. Some of the natives believe they are a cross between an ancient cow and the hippopotamus. The milk produced by the buffalo has a strong flavor, unpleasant to tastes not cultivated to its use, and the butter produced from the milk has in a much slighter degree the same taste.

Once in a while murrain takes off vast numbers of cattle in Egypt, and owing to this the breeding of the buffalo—almost exempt from the disease—has very largely taken the place of the common cow.

Sheep and goats are produced in large numbers. Of the former the fat-tailed species are most highly prized. Of the latter the angular-nosed species are the most profitable for dairy purposes, for which the goat is largely used.

A Mohammedan never associates with the hog in any way, considering the brute a most unclean thing; therefore the hog is reared only by Copts and Europeans.

The "pariah," or native dog, is also regarded by natives as an unclean animal, and it is tolerated only as a public scavenger. A large, rough-haired black dog, peculiar to Egypt, is noted for its ferocity and courage.

The ancient Egyptians were probably larger breeders of live stock than the modern. The former were a pastoral as well as an agricultural people. While they did not, as already stated, have all the animals of the present day, they had and reared in large numbers some now hardly known as domestic animals, among them the gazelle, the oryx, the ibex, and others of the antelope tribe.

Of wild animals in Egypt there are not many. Specimens of the wild boar are to be found in the Delta and in the Fayoom. The hyena skirts the deserts in search of food and prey. The gazelle is often found where the desert nearly approaches the Nile, and the antelope exists near the Natron Lakes and the Oases. The "mouflon," or maned sheep, is occasionally found, and the ibex exists between the Nile and the Red Sea. The leopard is also found among the Red Sea mountains and in the Sinaitic peninsula. The jackal and the wolf are rare, and the lynx is found in marshy regions in the Delta.

The last enumeration of domestic animals was in 1879. It is as follows:

Table of live stock in Egypt by provinces and municipalities.

Provinces and municipalities.	Cows, oxen, and buffaloes.		Horses.		Camels.	Donkeys and mules.	Sheep and goats.	
	Male.	Female.	Male.	Female.			Male.	Female.
Beherah	5,339	10,242	221	98	1,099	4,377	1,350	5,867
Guizeh	1,470	4,587	48	136	1,069	3,078	1,478	10,984
Kalionbieh	6,078	7,540	49	74	820	3,402	4,529	17,554
Charkieh	11,291	10,475	105	120	1,135	5,422	7,970	15,559
Menoufieh	11,154	33,059	59	59	4,004	15,214	4,296	22,638
Gharbieh	15,383	30,336	437	395	3,493	15,651	13,725	47,946
Dakahlieh	17,581	17,373	211	249	1,801	7,546	3,790	23,628
Beni-Souef	1,409	5,002	78	232	834	1,960	2,166	12,645
Fayoom	679	1,954	46	69	167	1,738	1,064	11,906
Minia	2,665	4,489	164	285	685	3,045	2,140	10,811
Assioot	2,041	5,816	166	380	3,088	5,126	3,196	21,843
Guergeh	2,255	8,136	151	307	2,560	5,730	5,118	19,796
Keneh	1,938	4,671	75	67	1,948	5,274	3,228	8,041
Esneh	1,071	3,154	47	69	1,063	3,052	2,953	11,681
Municipalities	233	905	1,109	235	2,505	7,337	6,601	1,140
Totals	80,587	147,739	5,966	2,775	26,871	87,882	68,008	251,439

BIRDS.

Of domestic birds there are reared great numbers, especially turkeys, geese, chickens, and pigeons. The turkeys are superior to those raised in Europe, and are quite as good as those of North America, whence this magnificent species of fowl creation has found its way to all parts of the globe. Geese are very fine. Chickens are generally very small, but are good; they are great producers of small but delicious eggs. Pigeons are reared in vast numbers, and the young birds are marketed in most excellent condition, as are also the other fowls. They are taken to the market places alive, and turkeys, geese, chickens, pigeons, and domesticated rabbits are, when selected, killed and dressed before the purchaser's eyes. Grown turkeys sell at retail for from $1 to $2.50 each; geese at from $1 to $2; chickens at from 40 cents to $1; eggs at from 8 cents to 20 cents per dozen.

FOOD PRICES.

Having given the prices of the above necessities of the table, permit me to give others. Beef and mutton are good, and in the markets they are tolerably well served. Choice beef sells for from 20 to 40 cents per pound, and mutton at nearly the same price. Vegetables are very plentiful and sell at reasonable prices. Native fruits are cheap enough. The finest oranges retail at from 1 to 2 cents each; lemons at the same price; limes at about 8 cents per dozen; fresh dates at 5 cents a pound; and the finest grapes in the world, for five months in the year, at from 5 to 15 cents a pound. Such prices as I quote rule at Cairo, and they are about the same elsewhere. Bananas are abundant, but not good.

ARTIFICIAL INCUBATION.

One of the oldest industries in Egypt is artificial egg-hatching, principally engaged in by Copts. There are said to be 700 establishments of this nature in the country, and the production of chickens from the ovens is estimated at from 10,000,000 to 12,000,000 annually. The season for incubating lasts through three months of the early summer. The country people bring eggs to the proprietors of the "farroogs," and give two good eggs for every newly-hatched chick.

COMMERCE.

The commerce of Egypt is very considerable. The chief exports are cereals, cotton, sugar, rice, rags, hides, and skins. The chief imports are cotton goods, coal, wines, oils, and machinery.

I have waited until the last moment possible for the compilation of this part of my report, hoping to be able to make a report of trade for the year 1886, but I am just in receipt of a letter from the Egyptian director of customs, dated December 30, 1886, stating that it will be impossible for him to present me with the statistics desired for some time to come. I may here add, that the statistics for the commercial year, ending August 31, 1885, were not made public until twelve months after the year ended. It may therefore be impossible to secure returns for the last year until nearly twelve months from now, all of which is very annoying.

Herewith is presented a table giving the value in Egyptian pounds (1 pound equals $5) of imports and exports from 1874 to 1885, general, and from and to the United States:

Imports and exports of Egypt, from 1874 *to* 1885.

Year.	General.			United States.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
1874	£5, 070, 741	£13, 423, 472	£18, 494, 213	£66, 883	£20, 290	£87, 173
1875	5, 619, 466	13, 333, 334	18, 952, 800	58, 039	19, 532	77, 571
1876	4, 253, 191	13, 561, 285	17, 814, 476	40, 393	32, 970	80, 363
1877	4, 493, 441	12, 756, 232	17, 349, 673	101, 088	39, 561	140, 649
1878	4, 844, 341	8, 097, 276	12, 941, 717	86, 693	26, 873	113, 566
1879	5, 002, 163	13, 439, 058	18, 441, 221	93, 371	26, 669	120, 067
1880	7, 794, 810	13, 154, 092	20, 948, 902	74, 975	98, 856	172, 831
1881	8, 201, 018	13, 178, 271	21, 379, 289	145, 463	49, 962	195, 425
1882	6, 423, 530	10, 993, 570	16, 416, 100	113, 201	30, 212	143, 413
1883	8, 021, 387	12, 309, 886	20, 331, 273	97, 929	29, 863	127, 765
1884	8, 363, 998	12, 679, 413	21, 043, 411	134, 903	4, 100	139, 003
1885	9, 198, 415	11, 743, 064	20, 941, 479	115, 851	29, 105	144, 956

As heretofore stated, statistical reports for 1886 are at present unattainable, and yet I have been able to gather points out of which the following table is made:

Items.	1885.	1886.
Duties on imports	£547, 261	£477, 800
Duties on exports (abroad)	99, 229	87, 250
Duties on exports to Turkey	26, 968	25, 970
Duties on tobacco	212, 265	304, 475
Sundry receipts	34, 868	36, 560
Totals	920, 613	932, 150

The above figures indicate no material change in the values of imports and exports combined, but were it not for the increased duty on tobacco there would not be so good a showing for revenue. A decrease of about £70,000 in duty on imports for 1886, means a decrease of nearly one million on the value of imported goods, which signifies a diminution of over 12 per cent. on the purchasing power of Egyptians, another evidence of retrogression caused by foreign oppression.

A table is herewith presented showing a comparison of general imports and exports for the years 1884 and 1885.

Another table is submitted presenting comparison between imports and exports of the United States for 1884 and 1885.

A third table shows a comparison of imports and exports for 1884–'85 with different countries, the maximum of comparison being 100,000.

It has been mentioned elsewhere that the duty on all imports as well as exports, is 8 per cent. ad valorem.

Value of merchandise imported, exported, and re-exported from 1884 *to* 1885.

Country of production or destination.	Years.	Total.	Importation.	Transit.	Exportation.	Re-exportation.
England	1885	£10, 990, 064	£3, 401, 347	£646, 419	£6, 909, 913	£232, 385
Do	1884	12, 286, 656	3, 090, 097	691, 065	8, 504, 594	.....
English possessions (Mediterranean)	1885	156, 071	137, 297	156	13, 705	4, 913
Do	1884	158, 864	122, 865	549	35, 450	.....
English possessions (Oriental)	1885	468, 754	451, 739	1, 162	11, 541	4, 312
Do	1884	463, 635	458, 873	2, 081	2, 681	.....
Germany	1885	51, 449	48, 104	136	637	2, 572
Do	1884	43, 161	39, 492	129	2, 540	.....
America	1885	146, 142	115, 851	665	29, 105	521
Do	1884	139, 008	134, 903	5	4, 100	.....
Austria-Hungary	1885	1, 801, 814	1, 098, 300	985	674, 754	27, 775
Do	1884	1, 671, 516	999, 441	1, 234	670, 841	.....
Belgium	1885	72, 902	70, 513	50	345	1, 394
Do	1884	87, 079	64, 985	.....	22, 094	.....
China and extreme Orient	1885	23, 861	22, 265	167	978	451
Do	1884	12, 153	11, 703	75	375	.....
Egyptian coasts on Red Sea	1885	126, 603	35, 056	5, 836	32, 823	52, 888
Do	1884	102, 134	39, 658	25, 735	17, 475	19, 266
Spain	1885	218, 936	541	.....	218, 383	12
Do	1884	170, 198	95	.....	170, 103	.....
France	1885	1, 914, 002	995, 153	503	908, 316	10, 030
Do	1884	2, 030, 051	914, 497	1, 008	1, 114, 546	.....
French possessions (Mediterranean)	1885	51, 876	41, 174	.....	8, 983	1, 779
Do	1884	27, 813	24, 218	.....	3, 595	.....
Greece	1885	115, 226	66, 931	203	46, 814	1, 278
Do	1884	164, 349	77, 024	98	87, 227	.....
Holland	1885	4, 861	2, 014	58	2, 581	8
Do	1884	3, 212	2, 996	.....	216	.....
Italy	1885	1, 234, 327	328, 177	652	901, 284	4, 214
Do	1884	1, 074, 453	310, 386	421	763, 646	.....
Morocco	1885	43, 554	42, 727	203	624	.....
Do	1884	31, 465	31, 141	324	.....	.....
Persia	1885	15, 601	15, 019	.....	582	.....
Do	1884	12, 273	12, 273	.....	.....	.....
Russia	1885	1, 666, 342	394, 663	522	1, 269, 612	2, 045
Do	1884	888, 683	227, 410	312	660, 961	.....
Turkey	1885	2, 368, 247	1, 855, 731	1, 149	354, 786	156, 581
Do	1884	2, 293, 658	1, 726, 265	1, 718	454, 588	111, 087
Other countries	1885	129, 903	75, 603	160	39, 204	14, 936
Do	1884	109, 278	74, 776	1, 474	33, 028	.....
Totals	1885	21, 600, 235	9, 198, 145	659, 026	11, 424, 970	318, 094
	1884	21, 769, 639	8, 363, 998	726, 228	12, 549, 060	130, 353

Value of merchandise imported from and exported to the United States during 1884–'85.

Articles.	1885.	1884.
Imported.		
Skins and articles in leather	£1, 107	£142
Animals and animal produce	.....	571
Grain and vegetable produce	.....	24
Spirits, liquors, and oils	115, 689	134, 059
Rags, paper, books	8	.....
Coal and wood	2	7
Textile industry	.....	15
Metals and articles in metal	9	3
Miscellaneous	36	73
Total	115, 554	134, 903
Exported.		
Hides	3, 105	.....
Colonial goods, drugs, and tobacco	246	939
Rags, paper, and books	24, 333	3, 015
Textile industry	1, 409	.....
Miscellaneous	12	146
Total	29, 105	4, 100

Value of articles imported from and exported to the United States during 1884–'85.

Imported.	
Silk and woolen goods	$36
Wines	9
Petroleum	115,677
Tanned skins	107
Refined oils	4
Books and other printed matter	8
Articles of minor importance	10
Total	115,851
Exported.	
Cotton	1,409
Rags of all kinds	24,231
Articles of minor importance	3,363
Various articles, and baggage	12
Total	29,105

Value of merchandise imported and exported during 1884–'85. (*Carried to* 100,000.)

Country of production and destination.	Years.		Periods of five years.	
	1885.	1884.	1879–'83.	1874–'78
Importation.				
England and English possessions	$38,472	$38,425	$39,205	$55,526
America	1,259	1,613	1,438	1,476
Austria-Hungary	11,040	11,949	11,294	10,373
France and Algeria	11,266	11,223	14,442	19,160
Greece	728	921	288	412
India and extreme Orient	5,153	5,626	4,873	4,796
Italy	3,568	3,711	3,486	4,510
Russia	4,291	2,719	1,931	1,118
Turkey and dependencies { taxed	1,998	3,419	3,780	1,687
Turkey and dependencies { prepaid	18,558	17,695	17,918	.....
Other countries	2,767	2,699	1,396	940
Exportation.				
England and English possessions	60,601	68,053	66,792	71,900
America	255	33	377	232
Austria-Hungary	5,905	5,346	3,754	4,701
France and Algeria	8,030	8,910	9,102	11,078
Greece	410	695	821	425
India and extreme Orient	109	24	40	.....
Italy	7,889	6,085	6,392	4,121
Russia	11,112	5,267	7,488	3,858
Turkey and dependencies { taxed	3,392	3,762	3,913	3,198
Turkey and dependencies { prepaid	.....	.....	.....	.....
Other countries	2,296	1,825	1,321	486
Total.				
England and English possessions	50,731	56,204	56,624	67,296
America	704	864	768	582
Austria-Hungary	8,597	7,987	6,533	6,2[illegible]
France and Algeria	9,473	9,885	11,070	13,2[illegible]
Greece	551	785	606	[illegible]
India and extreme Orient	2,359	2,265	1,821	1,[illegible]
Italy	5,961	5,136	5,321	[illegible]
Russia	8,070	4,248	5,440	[illegible]
Turkey and dependencies, taxed and prepaid	11,048	10,702	10,469	[illegible]14
Other countries	2,506	2,174	1,348	[illegible]

In consequence of the absence of quick direct transportation between the United States and Egypt neither the demand for the products of the United States in Egypt, nor *vice versa*, can be given. Quantities of canned fruits and vegetables and meats prepared in the United States are consumed in Egypt, but they are not embraced in direct trade, and therefore cut no figure in trade declarations. Such products are ordered from dealers in England, who deal directly with the manufacturers in the United States. The same relation applies to notions, patent medicines, and in less degrees to other products. Therefore, while the visible trade amounts at present to about $750,000, it would figure, with direct quick transportation, at about $1,000,000; and were such transportation afforded it would not be very long before the trade between the two countries would be doubled.

I had hoped to have matter in hand to present in this report the business of the Suez Canal, and also a comprehensive statement of wages in Egypt. But up to the date of closing I have not been able to procure the necessary data for either purpose; very shortly, however, I am confident, it will be in my power to do so.

JOHN CARDWELL,
Agent and Consul-General.

UNITED STATES CONSULATE-GENERAL,
Cairo, January 10, 1887.

Suez Canal traffic for the year 1884.

Nationality.	Steamships.		Nationality.	Steamships.	
	No.	*Tons.*		*No.*	*Tons.*
British	2,473	4,469,246.91	Egyptian	4	2,766.22
French	300	568,030.89	Ottoman	4	1,758.56
German	130	168,879.77	Portuguese	4	2,822.70
Dutch	145	284,239.50	Sarawak	1	178.82
Italian	55	115,713.15	American	4	5,498.23
Austrian	65	106,267.76	Japanese	13	12,565.82
Russian	17	29,616.39	Belgian	5	7,161.56
Spanish	46	96,352.09			
Norwegian	18	24,235.73	Totals	3,284	5,875,434.59

Suez Canal traffic during the year 1885.

Nationality.	Steamships.		Nationality.	Steamships.	
	No.	*Tons.*		*No.*	*Tons.*
British	2,780	4,341,792	Portuguese	5	3,864
French	293	620,363	Swedish	4	4,515
German	155	206,792	American	3	2,149
Dutch	139	247,918	Danish	3	1,288
Italian	109	167,159	Japanese	2	2,548
Austrian	71	112,579	Belgian	1	1,007
Russian	30	51,119	Greek	1	21
[illegible]anish	26	55,220	Persian	1	315
[illegible]rwegian	25	32,852			
[illegible]tian	13	6,077	Totals	2,621	6,884,963
[illegible]an	10	7,205			

Suez Canal traffic during the year 1886.

Nationality.	Steamships.		Sailing vessels.	
	No.	*Tons.*	*No.*	*Tons.*
British	2,345	4,132,805	1	17
French	227	484,717	.....	.....
Dutch	126	226,220	.....	.....
German	159	213,675	.....	.....
Austrian	77	129,078	.....	.....
Italian	67	120,670	.....	.....
Swedish and Norwegian	27	34,680	.....	.....
Russian	24	36,424	.....	.....
Spanish	26	60,702	.....	.....
Japanese	4	4,514	.....	.....
Portuguese	5	1,936	.....	.....
American	7	6,261	.....	.....
Egyptian	5	2,167	.....	.....
Ottoman	5	1,952	1	24
Danish	1	863	.....	.....
Jerusalem	.....	.....	.....	.....
Greek	.....	.....	2	95
Persian	.....	.....	.....	.....
Totals	3,105	5,456,664	4	136

Arrival and departure of American vessels at the consulate of the United States at Port Said, Egypt, during the year ended December 31, 1886.

Date of arrival.	Class.	Name.	Tonnage.	Where belonging.	Where from.	Where bound.	Date of clearance.
Mar. 23	Yacht	Namourna .	282	New York...	Nice	Red Sea	Mar. 23
May 4	Merchant...	Starbuck ..	1,584	....do	New York .	Hong-Kong	May 5
July 16	Man-of-war.	Trenton ...	1,625	United States	Yokohama.	Hampton Roads	July 17
Oct. 4	....do	Brooklyn ..	1,331	....do	Malta.....	Aden.....	Oct. 5
Oct. 31	....do	Essex.....	365	....do	...do	...do	Nov. 1
Dec. 11	....do	Ossipee	828	....do	Hong-Kong	New York	Dec. 13

Arrival and departure of American vessels at the consulate of the United States at Port Said, Egypt.

YEAR ENDED DECEMBER 31, 1884.

Date of arrival.	Class.	Name.	Tonnage.	Where belonging.	Where from.	Where bound.	Date of clearance.
Feb. 24	Man-of-war .	Trenton ...	1,625	United States.	Naples. ...	China	Feb. 26
Mar. 29	....do	Kearsarge	695	....do	Alexandria .	Syria.....	Mar. 30
Mar. 31	Merchant...	San Pablo..	2,112	New York	New York*.	Shanghai.....	Apr. 1
June 16	Man of-war .	Richmond .	1,525	United States.	Hong-Kong .	New York ...	June 17
July 5	....do	Ossipee	828	....do	Messina	China	July 7

*Cargo general.

YEAR ENDED DECEMBER 31, 1885.

May 8	Man-of-war .	Marion	551	United States.	Malta	Hong-Kong ..	May 12
Oct. 17	....do	Omaha.....	638	....do	Naples.....	China	Oct. 18
Nov. 19	Yacht.....	Brunhilde .	167	....do	Alexandria	Suez	Nov. 21

The coal traffic at Suez in 1885 was 25,000 tons; in 1886, 6,500 tons. The large quantity used in 1885 was in consequence of the Souakim expedition.

SOUTH AUSTRALIA.

Report of Consular Agent Smith on the commerce and industries of South Australia.

The past year has been one of the most disastrous ever experienced by the colony. As was intimated in last year's report, the harvest turned out a failure; the wool market was depressed, the copper market still more so, and throughout the community a time of unprecedented commercial depression told severely upon all classes. When it was hoped that matters had come to the worst, in the month of February a most unexpected and terrible disaster occurred in the stoppage of the Commercial Bank of South Australia, owing to a system of fraud which had been carried on for years by the manager and subordinates, finally bringing upon the unfortunate shareholders losses totaling about £280,000, and wide-spread misery followed, resulting in the criminals now undergoing penal servitude, with hard labor, at the stockade for periods of eight and six years each, the late manager having earned the doubtful reputation of having caused more commercial disaster and extended more misfortune than any other man during the forty-nine years of the colony's existence, as well as causing a severe shock to large commercial houses. Even at the time of writing this (December 11), another local banking establishment is the subject of something approaching a scandal, large advances having been made to the chairman, directors, and others, upon which a great loss will arise, in all probability, the money having been advanced to persons both in and out of business on inadequate security, or on none at all. There is certainly room for improvement in the management of some of the banking institutions in the colony, for while extravagant overdrafts have in many instances been made to persons standing rather high in the social scale, to poorer, honest, plodding tradesmen timely assistance is too often withheld. It is a singular fact that in the Australian colonies, the past year has been remarkable for frauds perpetrated by bank officials. In the month of April a report was circulated damaging to the savings bank, one of the soundest financial institutions in existence, and one having a system of audit and supervision so complete as to render it almost impossble for the least fraud to go a day undetected. However, a number of depositors belonging to the working classes were seized with a panic, and the consequence was a run on the bank. The institution, however, was in a position to stand it; the newspapers published reassuring articles, which had the effect of restoring confidence. The official banking returns for the September quarter of 1886, compared with those of 1885, are as follows. Some allowance must be made for the fact of the Commercial Bank of South Australia having disappeared from the list of local banks since last year. The returns for the quarter ending September 30, 1886, show a considerable falling off in certain items, indicating a drawing in on the part of the banks, so as to render their business safer if smaller. Under the head of "liabilities" we find average notes in circulation for September quarter, 1885, £520,917; 1886, £414,936. Bills in circulation 1885, £11,622; 1886, £9,496. Balance due to other banks 1885, £86,357; 1886, £109,926.

Items.	1885.	1886.
Deposits not bearing interest	£1, 649, 360	£1, 377, 740
Deposits bearing interest	4, 155, 438	3, 747, 396
Total deposits	5, 804, 791	5, 122, 136
Totol average liabilities	6, 432, 694	5, 656, 530
Assets, coined metal, bullion, &c	1, 333, 472	1, 283, 980
Public securities	25, 692	22, 660
Land and buildings	405, 793	385, 646
Notes and bills of other banks	64, 505	66, 109
Balance due from other banks	228, 058	203, 417
Bills discounted and other debts due other banks	10, 179, 680	10, 009, 182
Total average assets	12, 237, 200	11, 965, 936

But taking the total liabilities for the corresponding quarters of the two years, and the total assets for the same periods, while both are less for the September quarter of 1886, we find a much better state of things than might at first be supposed from the above figures when we strike a balance, for it shows that the net assets after deducting the liabilities are £495,400 more this year than last.

On June 30, 1886, the amount at the credit of depositors, including interest, was £1,653,080. The number of deposits made during the year was 109,622, the amount £958,819, as against 112,119 and £912,181 in 1885. The depositors receive at the rate of 4½ per cent. per annum. The average of depositors to the total population of the colony, estimated at 316,000 on June 30, is as 1 in 5.72, or about 17 in every 100 persons; the average amount at the credit of each depositor was £29 18*s*. Considering the last year's commercial depression, the returns speak well for the future of the people of this colony.

AGRICULTURE.

The year now closing has been one by itself as to the nature of the seasons, which have been entirely one of the usual course. The most experienced persons were puzzled as to the forecasting harvest prospects. At the early part of the season the outlook was very bad, but late rains have improved the crops very much, many parts turning out as much as 12 and 15 bushels per acre being reaped; but the large area badly cultivated, or attempted to be cultivated, where everything in nature is against the farmer, will bring down the average, which, however, is likely to be about 6 bushels to the acre of fine healthy wheat. The area under cultivation is not far short of 2,000,000 acres. After deducting what will be required for seed and home consumption, there should be left for export, in round numbers, near 200,000 tons for export of breadstuffs, the wretched harvest of last year only allowing an export of 61,362 tons to October 31 of the year.

EXPORTS AND IMPORTS.

The exports of wool this year will be far the largest shipped from South Australia, owing largely to the fact that the navigation of the Upper Murray and the Darling Rivers have been kept open by floods at the right time. The number of bales of wool shipped to the 30th of November, 1886, was 103,221 bales, valued at £1,152,597, as against 1885, amounting to 151,978 bales, valued at £1,671,775. The export of minerals and breadstuffs to November 30 of the year cannot officially be obtained from the customs, but the total of exports to November 30 amounted to £3,312,586, covering the value of wool as shown above. The total imports to September 30 amounted to £3,498,888.

POPULATION.

Owing to the severe depression under which the colony has been suffering, a considerable exodus, more especially of the working classes, took place, amounting to some 6,000 souls in the year, who went to the neighboring colonies in the hope of bettering their condition. The government estimate of the population of the colony on June 30 was about 3,000 less than at the close of 1885; or, in round numbers, 316,000. But since the discovery of the gold fields, referred to elsewhere, the tide has turned, and for some weeks the arrivals have been considerably in excess of the departures; besides, the natural increase of births over deaths for the year will be about 8,000, so that the total population on December 31 will probably be 325,000. The returns of births and deaths for the quarter ending September 30 show the former to have been 2,868 and the latter 814. The increase of births is 300 less than that of the corresponding quarter of 1885, but the death rate this year is also much lower, being less than in any year for the last five, and 79 below the general average. This may be fairly placed to the credit of the system of sewerage which has been carried out in the city and the stricter enforcement of sanitary laws generally throughout the centers of population. The births in the September quarter were, 1,439 males, 1,429 females; deaths, 468 males, 346 females. The decrease of deaths is greater among persons under twenty years of age.

SHIPPING, PORT ADELAIDE.

The following return has been published showing the relative proportions between the arrivals of steamers and sailing vessels at Port Adelaide (exclusive of coasting craft) during six months ending August 31: In March there were 25 steamers and 24 sailing vessels; in April, 21 and 25, respectively; May, 24 and 7; June, 19 and 15; July, 24 and 18; and in August, 24 and 14, making in all 137 steamers and 103 sailing vessels; but the aggregate tonnage of the steamers was much larger in proportion than that of the sailing vessels, the former only landing small portions of their cargoes here on their way to the other colonies. The least depth of water in Port Adelaide at low-water spring tides is 20 feet in the channel, with a rise of about 8 feet.

The bonded debt of the colony of South Australia at the close of the present year stands at £18,328,500, or equal to an indebtedness of £56 7*s.* 10*d.* per head of the entire population, estimated at 325,000 souls. A loan of £1,332,400 at 4 per cent. was floated in April, the minimum being fixed at £99. Double the required amount was offered, and the average price received for the loan was £99 9*s.* 5$\frac{1}{2}$*d.* On December 13 these bonds were quoted on the London stock exchange at £104 10*s.* The loan above referred to was appropriated as follows: £505,900 for extending the Great Northern (transcontinental) Railway from Strangway's Springs to the Peak; £530,000 for water conservation; £43,000 for railway works in the settled districts; £53,000 for completing the new parliament buildings; £37,000 for defense purposes; £17,400 for telegraph and telephone extension; £16,500 for harbor improvements, the balance being reloaned to that portion of the province known as the Northern Territory (Port Darwin).

The revenue and expenditure of the government for the year ending June 30, 1886, were, revenue, £2,279,038; expenditure, £2,383,289. The deficit was £813,492. The actual expenditure for the year was £35,838 below the estimate. The revenue turned out more than the estimates by

£35,636 and £121,107 more than that of the previous year. The income derived from the railways department was £106,000 less than that of the previous year, and that from the territorial revenue £200,000 less. The expenditure for the year ending June 30, 1886, was £47,233 less than 1884–'85.

The land sales, including the territorial revenue, show unmistakably the severity of the tidal wave of depression which passed over the colony, and which, it is hoped, has now commenced to ebb. The total sales of land for cash during the year 1884 up to December 14, were only 3,624 acres, for £5,803, and the sales on credit were 14,353 acres, for £14,698, making a total for cash and credit of 17,977 acres, for £20,501, as against 206,044 acres, for £279,094, the previous year.

WINE AND OLIVE OIL.

The wine-making industry is steadily progressing and the late Colonial Exhibition in London has given a great impetus to the trade. South Australian wines are now entered on the list of wines at several of the London clubs and are found on the tables of the aristocracy. Olive oil is also manufactured by a comparatively few persons, but the quality of that made in the colony is so excellent that the industry must grow and become increasingly important. The quantity of wine and oil made during the year cannot be ascertained at present.

WOODS AND FORESTS.

As remarked in former report, the planting of forest trees and the conservation of woods and forests very properly receive a large amount of attention in South Australia. The colony is beginning to feel the benefit of it, as a considerable quantity of timber for railway sleepers has been cut during this year, giving a revenue of £2,660 in excess of expenditure, exclusive of special votes. Since the organization of the department ten years ago, £59,043 has been received by it for timber sold, land rented for grazing, &c., and £58,216 has been expended as permanent improvements upon the forest reserves. From the commencement the total net profit made by the department has been £827. The work is very progressive, and every year shows considerable advance beyond the previous one. The revenue of the past year was £8,123, or £1,606 in excess of any former year. No less than 165,324 acres in various parts of the colony are forest reserves, and of this 6,685 acres are inclosed for planting.

The present total value of the permanent improvements effected by the department is estimated at £150,000 for an expenditure of £58,206, spread over ten years, and more than the whole of which has been repaid by sales of timber, rents for grazing, &c.

LIVE STOCK.

For want of statistical returns it is impossible to give even an approximate estimate of the live stock in the colony. Probably the returns of the previous year will not be far out for the present, as far as sheep, cattle, and horses are concerned. Camels and ostriches continue to do well, increasing in number every year.

SOUTH AUSTRALIAN GOLD FIELDS.

No organized exploration of the interior has been carried on by the government, but Mr. D. Lindsay has the greater part of the year been trav-

eling across the continent. News has just been received of his arrival at Port Darwin and subsequent departure by sea on his return to Adelaide. He is said to have discovered some fine country and mountain ranges 12,000 to 15,000 feet in height, higher than were believed to exist on the continent of Australia.

The most important and noteworthy circumstance which has occurred in South Australia during the past year is the discovery of a rich alluvial deposit of gold about 230 miles north of Adelaide, and within 20 miles of the railway line, now nearly completed, to the rich silver district across the New South Wales border, and known as Silverton. The existence of gold in the neighborhood of the recent discovery has long been known, and a reef of ironstone and quartz, yielding gold in payable quantities, from 17 pennyweights to 1¼ ounces per ton of stone, has for many years been worked 15 miles to the west of the newly-found alluvial. The place is called the Teetulpa gold fields, from the name of the sheep-run on which it is situated.

The account here given of it has been furnished by Mr. I. B. Austin, a recognized authority on mining matters in the colony, and who has for ten or twelve years been acquainted with this part of the country as an auriferous district. Shortly after the alluvial discovery was made public he visited the locality, so that much of the information is given from his personal observation. Notwithstanding the fact that gold reefs had been worked for years within a few miles of the place and some prospecting done with the view of finding alluvial gold, the discovery was made quite accidentally. Two men, who had been searching for gold and were camping at a "dam" or water reservoir with some others, went in search of their horse, which had strayed, and while looking for it a thunder-storm came on. The rain washed away some of the soil in a small creek, exposing to view two or three nuggets of gold. The party fossicked them out with three or four more, and after waiting, with the digger's usual caution, until the other men had gone away, they proceeded to open up the ground, which they found so rich, that they at once applied to the warden of the gold fields for a prospector's claim, and the reward of £1,000 offered by government for the discovery of a new and payable gold field. A rush speedily took place, and a number of nuggets were found in the little dry creek, some only two or three inches from the surface and some in the crevices of slate rock.

In about a fortnight from the announcement of the discovery it was estimated that 2,000 men were on the field, but hardly one-fifth of the number had any knowledge or experience of gold digging, and the remainder took a cynical pleasure in denouncing the diggings as a "fraud." Of the few who understood the work by no means all were successful, but a good number were so, some being especially fortunate, as the following facts will show. It should be borne in mind that no washing was attempted for the first fortnight, all the gold being picked out of the dry and friable loamy soil and gravelly wash-dirt. Two boys got out 3 ounces in two days; four men got 16 ounces of rough, nuggety gold in one week; one man got 18 ounces in eight days; four men got 30 ounces in one week. The pieces varied in weight from half a pennyweight up to several ounces (3, 5, and 6 ounces), and one of 8 ounces 14 pennyweights was also found. Since then several nuggets have been found, weighing, stated roughly, without being exact to pennyweights and grains, 10 ounces, 10½ ounces, 11½ ounces, 12, 13, 16, 18, and 29¾ ounces, all fully authenticated, and more than one from 7 ounces to 12 ounces. Besides these there is a report of one weighing over 61 ounces, which, not so undoubtedly confirmed as the others, is nevertheless stated on excellent authority to be genuine.

In addition to the nuggets picked out dry, the wash-dirt, since washing has commenced, has yielded fair average results, as, ½ ounce, ¾ ounce, 1 ounce, up to 6 and 7 ounces of gold to the load, *after* having been dry picked. It must be admitted that perhaps more than half the stuff washed has given nothing payable, but taking it altogether, and considering all the circumstances of the case, especially the comparative scarcity of water and the fact that the field has not been fairly worked more than eight weeks, the results obtained have been wonderful.

It is extremely difficult to arrive at even an approximate estimate of the quantity of gold obtained so far, but I should think it not less than 4,000 ounces and probably 5,000 ounces.

One man from New South Wales has a very rich claim about a mile from the original discovery, and he has in about a month obtained over £600 worth of gold; two other men in about five weeks had secured £2,000; a sheep-farmer in five weeks got over £700 worth.

Young fellows under twenty years of age, who have been there three or four weeks, on the diggings have returned home with gold to the value of £100 up to £300. The government are hastening themselves to provide a supply of water, with a good prospect of success, and if this is assured, the future of the gold field is certain. There is a vast extent of country similar, geologically speaking, to that where the gold has been found. It extends about 100 miles from west to east to the borders of New South Wales and Queensland, and is believed to be 50 or 60 miles in width from south to north. Although water is spoken of as comparatively scarce, it is not difficult to obtain by sinking. Wells in the neighborhood from 40 to 100 feet in depth yield an abundant supply. One well about 2 miles from the center of the gold field appears to be inexhaustible, as a stream-engine cannot pump it dry. It has been discovered that with very little trouble the water can be conveyed in pipes from the well onto the diggings, so that in future it should not be difficult to put the wash dirt through the cradles. The government geologist has reported very favorably on the prospects of the district as a gold-producing tract of country. In South Australia ironstone is about the most favorable matrix for gold, and ironstone abounds in the Teetulpa and adjacent districts. Gold may be easily seen with the unaided eye in good iron ore containing 50 per cent. of the baser metal, and in some cases from 40 to 80 ounces of gold per ton of stone by fire assay. The regularity of the reefs is worthy of note, their strike being singularly uniform, running in a line 10 degrees north of east, and they are very numerous throughout this country, many of them being gold bearing. It is also curious, as a fact, that most of the gullies or watercourses have a general direction north and south. At the northern end of the gully, where the alluvial gold was first found, is a large flat or alluvial plain very likely looking for deep sinking, say 50 or 60 feet. The geologist discovered very promising looking "wash" here, and the place is now being tested. Sixteen miles from the gold field, a little to the west of north, a bold hill, called Mount Victor, rises a prominent object. It has long been a favorite spot in the opinion of prospectors, who often assert that rich discoveries will be made around the mount. The prevailing rocks are quartz, ironstone, slate, and limestone. Fine specimens of gold in quartz and in ironstone have been found in several localities around, some of them being 50 or 60 miles distant from the diggings. The quality of the gold is excellent, being 23 carats fine.

The English, Scottish, and Australian Chartered Bank has established an agency in the diggings for the purpose of purchasing gold. The price given is £3 17*s.* 6*d.* per ounce. The gold if quite clean would be

worth a little more, out it generally has a slight mixture of impurities which detracts from its value.

ARTESIAN BORES AND WATER CONSERVATION.

Scarcely second in importance to the grand gold discovery is the success which has during the past year attended the operations of the water conservation department. In the month of September a bore made by the diamond drill at the Hergott Railway station, on the Great Northern line, which is being gradually extended across the continent, struck a strong spring at the depth of 348 feet. The water rose and flowed over the surface at the rate of about 3,600 gallons per hour, gradually increasing to 4,000 gallons. On pipes being fixed to convey it into the elevated tanks, placed at a height of 60 feet to supply the locomotives, the water rose to that height and flowed into the tanks. The supply still continues unabated. Shortly after this another bore was put down at Strangways Springs, about 65 miles northwest from Hergott. Here at the depth of 308 feet a much stronger spring was struck, the water rising with considerable force in a fountain 9 feet in height, at the rate of 1,000,000 gallons per day. The surrounding country being flat, was soon flooded for miles around. Unfortunately, the presence of a small portion of magnesian salts in the water rendered it unfit for irrigation purposes. It has, however, since improved in this respect. A third bore in the same district, and about 25 miles distant from the former, and in a northerly direction, has also been successful. It should be stated that in these localities there were natural springs previous to the boring, but the supply of water from them was limited. The quality of the water is excellent, quite good for domestic use as well as for stock. The source of supply is supposed by geologists to be in the great dividing range on the southern part of Queensland, some 700 miles distant from the site of the bores. The rainfall on this range is enormous—60 to 70 inches in the year—and it is supposed to percolate through the strata until it reaches a retentive stratum which appears to continue in the form of a huge basin for the distance mentioned. It is therefore considered probable that over this immense area artesian bores may be sunk with the certainty of success. Another most important discovery of water has been made in a part of the country more in need of it than those just mentioned. It is in the southwestern portion of the province, near the border of Western Australia, on the "Mellabar Plains," hitherto a waterless country, and having a limited rainfall. The bore was put down to the depth of 749 feet, when a spring of fine water was struck which rose to within 150 feet of the surface. The benefit to the country resulting from these artesian wells will be very great. Another bore is now commenced a few miles further inland, in the southwest district. The Government is also very anxious to provide a supply of water for the diggings, and it is probable the drills may also be set to work in that locality, though the conservation of water does not think favorably of the prospects of deep boring there. In the settled districts a considerable amount of important work has been done in forming, repairing, and cleaning dams and reservoirs, in sinking wells and artesian bores in different parts of the country, with such successful results that provision has been made for a *daily* increase of consumption of 743,408,228 gallons. The expenditure of the department totaled £67,350.

PUBLIC WORKS.

In public buildings but little has been done of importance excepting the Jubilee Exhibition building, which will be a handsome and permanent erection. Harbors, jetties, and light-houses are in a state of efficiency, although within the last year considerable reduction has been made in expenditure, owing to the depression existing. The gross expenditure of the marine board for the year has been chiefly for deepening operations in the principal ports, amounting to £49,778. Some important additions have been made to the forts for the defense of Port Adelaide, and a site has been selected for another fort at Glenelg. A further supply of ordnance, torpedoes, &c., is on the way from England.

MAIN ROADS.

The length of main roads in South Australia on June 30, *i. e.*, under control of the department was 4,127 miles, and the expenditure on them for the year was £156,840.

RAILWAYS AND OTHER PUBLIC WORKS.

The length of government railway lines open for traffic on June 30, 1886, was 1,203 miles, or 140 miles more than at the end of 1885. There is also a considerable length of railways in course of construction and which will very shortly be completed. The line connecting Adelaide with Melbourne was opened on May 1 as far as the South Australian border, about 100 miles; the remainder, on the Victorian side, was opened in September right through to Melbourne, when some of the splendid American boudoir cars (sleeping) were brought into use. The railway to the Silver district in New South Wales is fast approaching completion, and work has been commenced on the northern end of the transcontinental line, at Port Darwin.

The passenger traffic for the year ending June 30 was 3,961,650, and the total tonnage of goods carried was 742,942 tons. The earnings per train mile were 67.52 pence, and the cost per train mile were 45.47 pence. The earnings from the railway amounted to £549,092, leaving a net profit of £178,438, equal to 2.37 per cent. on the capital invested in lines open for traffic, which is £7,553,500.

THE SOUTH AUSTRALIAN JUBILEE EXHIBITION.

In the present year (1886) the colony of South Australia has completed the fiftieth year of its existence, having been formally proclaimed a British province by Capt. J. Hindmarsh, the first governor of the colony, who arrived on December 25, 1836. The colonists fixed the year 1887 for their Jubilee Exhibition, chiefly to avoid interfering with the Colonial and Indian Exhibition held in London this year, and partly to make it contemporary with the jubilee of the reign of Queen Victoria. A handsome building for the exhibition has been erected within the city bounds, but on a splendid site away from the business portions of the place. The erections, including annexes, &c., will cover nearly 4 acres of ground, and the whole area of ground inclosed for exhibition purposes is about 18 acres. The main building is in the Italian style of architecture, and consists of a basement, ground floor, central hall, and galleries. This central main building covers over a square acre, having a frontage of 244 feet by a depth of 204 feet. The ground floor is in

the Doric style, and the upper floor Ionic. The building is 115 feet in height to the top of the central dome. The main hall is 150 feet in length by 86.9 in width and 56 feet in height to the center of the roof. A handsome colonnade and terraces surround the building, and as the ground has a very steep slope towards the bank of the river Torrens, retaining walls and terraces with flights of steps have been built at the rear. On either side of the great hall is a court, each measuring 150 feet by 60 feet. The western annex is divided into eight courts, each 200 by 50 feet. The eastern annex is smaller and of irregular shape. Sheds for machinery, &c., will be erected on the flat nearer the river. The contract price for the main building is about £20,000, the annexes about half as much. The government is expending £32,000 by the authority of parliament, but to Mr. E. T. Smith, the present mayor of the city of Adelaide, belongs the credit of bringing to a successful issue the project of the exhibition, he guaranteeing £5,000 to the government and induced several leading colonists to guarantee £20,000 more, so that the public funds should be safe from loss. A branch line from the Central Railway station will be constructed to the exhibition grounds for the convenience of bringing the exhibits right onto the spot. A considerable amount of space has been applied for by English and colonial exhibitors, and it is expected that the United States will, as usual, be well represented. Intending exhibitors wanting an agent to represent and look after their interest can be safe by sending their goods to the address of the United States consular agent, Port Adelaide, with instructions how to act.

J. W. SMITH,
Consular Agent.

UNITED STATES CONSULAR AGENCY,
Port Adelaide. December 18, 1886.

MALTA.

Report of Consul Worthington.

There have been no changes made in the port dues and custom duties since my last annual report of February 18, 1886.

I cannot submit to your Department a more excellent and trustworthy résumé of the trade of Malta during the year 1886 than the one Mr. Charles Breed Eynaud, merchant and banker of this island, has just favored me with. Mr. Eynaud's figures and statements are more reliable than the statistics officially published here. His report is as follows:

MALTA, *February* 18, 1887.

JOHN WORTHINGTON, Esq.,
Consul for the United States of America, Malta:

DEAR SIR: I beg herewith to give you a general review of the trade of Malta in 1886, with some statistics bearing thereon.

Again precautions against the introduction of cholera into the island were taken in 1886 by the imposition of quarantine, and in some instances by a refusal to receive arrivals from ports considered infected. These interdicts affected in their turn, or sometimes simultaneously, the following countries, viz: Austria, Continental Italy, Spain, Barbary, Sardinia, Sicily; also ports on the Danube and west coast of the Black Sea. These restrictions continued, although at times mitigated, until December 7 ultimo, when the last suspected country received free pratique. At the present moment the commerce of the island with all countries is entirely unshackled in this respect. The year 1886 is remarkable as showing the first check in the progressive increase in our important trade of coaling steamers. From the figures that follow it will be seen that the decrease in arrivals of merchant steamers in 1886, as compared to 1885, was in number 820, and in tonnage 816,053, and that we imported less coal in 1886 by 112,474 tons than in 1885. Of the steamers calling here bound to or coming from the Suez Canal the decrease in the year was in number 293, and in tonnage 325,676. This latter cannot be attributable to quarantines, as arrivals from and to that direction were not affected in this respect.

The most reasonable conclusions are the dullness of trade, and that the size of steamers making such voyages is much larger than heretofore, and the adoption of improvements in machinery economizing fuel is becoming general, and Malta being only a distance of four or five days' steaming to or from Port Said, this port can be more conveniently passed than formerly. Trade in 1886 also shows a diminution in imports of the following articles, viz: Manufactured tobacco, petroleum, cheese, coffee, and olive oil, and an increase in leaf tobacco, alcohol, flour, codfish, salmon, lard, butter, Florida water, and rice; but in all articles of trade margins of profit have been small, and in many instances losses have been felt.

COAL.

The total importations in 1886 amounted to 506,322 tons, as follows:

Whence imported.	Tons.
South Wales, England	450, 550
The North Country, England	39, 757
Mersey, England	14, 065
Antwerp, Belgium	1, 950
	506, 322

Against total importations in the subjoined years:

Year.	Tons.	Year.	Tons.
1885	618, 796	1880	374, 036
1884	529, 204	1879	343, 803
1883	582, 975	1878	359, 042
1882	557, 439	1877	246, 766
1881	450, 955	1876	297, 787

The arrivals in our harbor in 1886 were as follows: 176 men of war, 3,604 merchant steamers, 1,257 merchant sailing vessels, 42 steam and sailing yachts; total, 5,079; against a total of 5,992 in 1885, 5,522 in 1884, 5,974 in 1883, 6,675 in 1882, 5,830 in 1881, 4,962 in 1880, and 5,043 in 1879.

The mercantile steamers arrived in 1886 were:

Nationality.	No.	Tons.
British	2,023	2,825,225
French	164	176,088
Italian	151	78,875
Norwegian	73	59,936
German	69	76,094
Greek	42	40,126
Belgian	21	22,967
Austro-Hungarian	19	16,538
Ottoman	17	16,229
Danish	10	8,682
Russian	5	3,226
Spanish, 3; Dutch 3	6	5,090
Swedish	2	1,365
American, United States	1	1,548
Japanese	1	1,197
Total	3,604	4,334,270

Against a total of 4,424 in 1885, measuring 5,150,323 tons register, of which 3,846 were British, and 3,853 in 1884, measuring 4,371,548 tons register, of which 3,346 were British, and 4,228 in 1883, measuring 4,675,231 tons register, of which 3,675 were British, and 4,625 in 1882, measuring 4,821,487 tons register, of which 3,847 vessels were British, and 3,885 in 1881, measuring 3,681,725 tons register, of which 3,175 were British.

Of the 1,257 sailing merchant vessels arrived in 1886, measuring register tons 106,193, 815 were Italian, measuring 50,573 tons; in 1885, 1,380 sailing merchant vessels arrived, measuring 125,645 tons; in 1884, 1,528 sailing vessels arrived, measuring 132,944 tons; in 1883, 1,579, measuring 152,673 tons; in 1882, 1,789, measuring 116,083 tons; and in 1881, 1,728, measuring 177,072 tons.

Among the arrivals in 1886 are 1,103 vessels, which called here bound to or coming from eastern ports via the Suez Canal. Of these 22 were men of war, 25 transports, and 1,056 merchant steamers, which latter measured 1,756,449 tons. The number of passengers on board all these vessels was 52,904, civilian and military. The figures for the previous six years were as follows:

Description.	1885.	1884.	1883.	1882.	1881.	1880.
Men-of-war	24	16	12	13	11	27
Government transports	30	22	21	24	22	32
Merchant steamers	1,349	1,172	1,227	1,133	1,042	809
Tons register of merchant steamers	2,082,125	1,849,424	1,674,745	1,421,701	1,365,263	1,378,489
Number of passengers	59,132	51,461	44,776	43,469	37,720	46,289

Of the arrivals in 1886, 7 sailing vessels—5 Italian, 1 British, 1 Austrian—discharged cargoes from United States ports; 4 however only brought part of cargoes; 16 steamers, laden at ports farther east, called here bound to United States ports; 11 steamers put in here with cargoes laden in the United States for ports to the east of this; 7 steamers left this in ballast to proceed to other Mediterranean ports to load for the United States. One of the steamers from New York bound east through the Suez Canal was under the American flag; 7 United States ships of war called here and took coal.

AMERICAN TOBACCO.

It must be borne in mind that a considerable quantity of cheap cigars is made here, and, as they are required to be strong, tobacco of Kentucky and Virginia growth is the most adapted for our use. It should be dark and dark chestnut in color, and not less than two or three years old. We cannot take the fine grades of those States either, as the cigars have to be sold very cheap, hence every economy has to be used in manufacturing them. Three-fourths fillers and one-fourth binders and wrappers are the proportion, but when leaf is moderate in price medium to good leafy lugs are

the most remunerative to import, and when low-class fillers are more abundant and cheap then we require a larger proportion of common leaf to medium wrappers. At the present moment two-thirds of our stock consists of medium to good leafy Kentucky lugs, which would work up in themselves with a small help of wrappers. Cheap, sound Kentucky and Virginia fillers are scarce.

The cigar trade, although improving, is not so important as in 1883 and further back.

The importations in 1886 of leaf in hogsheads show a large increase on the previous year, in fact are nearly double. Our supply has again in 1886 been largely drawn from Italy, being the refused from the régie contracts, viz, tobacco that did not come up to the class required or contracted for, or had imperfections, or the repacked from damaged parcels. The following are the particulars of the importations of leaf in 1886, viz:

Whence imported.	Hogsheads	Cases and bales.
United States	159	9
England	326	168
Italy	568	86
Antwerp	43	3
France	14	177
Gibraltar	14	117
Other ports	3	8
Total	1,127	570

Importations of American leaf from 1879 *to* 1885.

Year.	Hogsheads.	Cases and bales.	Year.	Hogsheads.	Cases and bales.
1878	574	362	1882	892	471
1879	1,433	111	1883	1,632	515
1880	1,076	195	1884	120	415
1881	788	338	1885	602	579

AMERICAN MANUFACTURED TOBACCO.

Cavendish, &c., for chewing and smoking; the importations in 1886 show a small falling off on those of 1885. They were:

	Packages.
From England	1,589
From the United States	448
From Antwerp	59
From Gibraltar	105
From France	10
Total	2,211

Importations of American manufactured tobacco from 1878 *to* 1885.

	Packages.		Packages.
1878	2,163	1882	3,175
1879	2,477	1883	1,632
1880	2,754	1884	2,124
1881	2,096	1885	2,740

CIGARS.

Importations of cigars from 1879 *to* 1886.

	Cases.		Cases.
1879	197	1883	598
1880	228	1884	449
1881	252	1885	325
1882	842	1886	382

Of the imports of 1886 there were 44 cases from the East Indies and a few cases of Havana, but the larger part were of German manufacture for the supply of the better classes, as the strong-flavored Malta cigar, which retails as low as 9*d* per 100, is smoked generally by the lower classes.

REFINED PETROLEUM.

This market only takes refined in cases.

	Cases.
Stock in depot on January 1, 1886	33,014
Imported in 1886	56,685
Total	89,699
Delivered in 1886	50,240
Stock on January 1, 1887	39,459

The importations in 1885 amounted to 64,682 cases, which were only exceeded in one year since 1876. In 1886 the imports consisted of 26,182 cases Pratt's radiant, 18,000 cases Pacific, 12,326 Atlantic, and 177 cases Russian petroleum.

ALCOHOL.

In 1886 the importations were 941 butts and hogsheads German or Continental distilling, estimated to contain 81,520 American gallons; 213 barrels American, 9,800 American gallons; total, 91,320 American gallons against a total of importations in 1885 of 86,915 gallons, and 82,080 in 1884. In 1886 there were 185,500 gallons spirits, including liquors, entered for local consumption and paid duty.

WHEATEN FLOUR.

Although the relative duty on wheat and flour is such as to afford some protection to millers, still we had quite a novelty last year by the introduction into Malta of 5,380 bags (of 165 pounds each) Braila flour, which sold freely for bread-making at from 12*s*. 1½*d*. to 13*s*. 3½*d*. per 100 pounds c. i. f.

American, Trieste, and French flour is imported almost entirely for pastry cooks and to supply shipping. All these three sorts sustained their figures in imports last year as compared with those of 1885.

Importations in 1885 *and* 1886.

Description.	1886.	1885.
Braila ..... bags..	5,380	.....
American ..... barrels..	3,354	3,213
Trieste ..... do....	593	177
French ..... do....	488	489
Algeria ..... bags..	35	160
Barrels and bags	9,850	4,039

In 1884 the importations were 2,982, in 1883 they were 2,687, in 1882 they were 5,088, in 1881 they were 2,791, and in 1880 1,971 barrels and bags. In 1886, 113,823 quarters hard wheat and 1,564,125 pounds of wheaten flour and maccaroni were entered for local consumption and paid duty.

LARD.

In 1886 the importations were 1,656 packages, all American, against 1,138 in 1885, 1,168 in 1884, 760 in 1883, 1,320 in 1882, 1,225 in 1881, 1,960 in 1880.

HAM AND BACON.

In 1886 there were imported from England 1,029 packages, but more than two-thirds were American, against 1,043 in 1885, 1,927 in 1884, 983 in 1883, 1,623 in 1882, 960 in 1881, and 730 in 1880.

CHEESE.

The entries in 1886 were 4,374 boxes, all, with trifling exceptions, American, received via England. In 1885 we imported 5,020 boxes, 2,852 in 1884, 2,625 in 1838, 4,005 in 1882, 2,951 in 1881, and 2,332 in 1880.

BUTTER AND BUTTERINE.

In 1886 there were imported 10,752 firkins and kegs, all from England, but mostly of American manufacture, against 7,662 packages in 1885. 4,764 in 1884, 4,748 in 1883, 4,035 in 1882, 4,364 in 1881, 2,828 in 1880.

FLORIDA WATER.

In 1886, 9,518 dozen bottles were imported, against 4,334 dozen in 1885, 4,317 in 1884, 7,925 in 1883, 6,580 in 1882.

CLEANED RICE.

In 1886 the entries were 15,251 bags of two hundredweight each. With the exception of a small quantity of Egyptian and Italian, all was Indian, received via England. None came here direct from Burmah.

Importations from 1879 *to* 1885.

2879	25,507	1883	12,266
1880	27,914	1884	8,041
1881	22,622	1885	12,446
1882	31,500		

The low price at which wheat ranged in 1886, affected the consumption of rice, although it could also be had throughout the year at moderate prices.

COFFEE.

Brazilian growth is the favorite here. In 1886, 5,193 bags were imported, nearly all via England, some coming from Italian ports. The imports were less than half of the quantity in 1885; but at the commencement of 1886 we had a large stock in the hands of speculators, which was gradually released as prices began to rise.

Importations from 1882 *to* 1885.

1882	11,737	1884	4,686
1883	9,868	1885	12,619

CODFISH.

Shore dried is very much preferred here. The soft is neglected, even at a considerable difference in price, when shore is obtainable.

This season has been characterized by a remarkable diminution in the export demand, so that our present stock is more than we shall require up to the end of Lent, when the consumption of codfish practically ceases, consequently holders show much anxiety to realize. In all 1886 we imported 8,715 quintals, of which 3,047 quintal arrived in the last half of the past season, and 5,668 from the commencement of the season to the end of 1886. The larger portion of the latter consisted of 2,800 quintals shore per Edith Eleanor which arrived in the first week of November from Newfoundland, and 1,700 quintals Norwegian, direct from the Baltic in the middle of November. These direct importations arrived much later than usual. They are generally looked for shortly after the middle of September. In 1885 there were imported 4,601 quintals, of which only one cargo of 2,365 quintals shore came direct.

PICKLED SALMON.

In 1886 the imports were 702 tierces, against 447 in 1885 and 579½ tierces in 1884.

OLIVE OIL.

Stocks in cisterns were uniformly light in 1886, and continued so. Very little was exported in 1886, but the deliveries for local consumption in the year were 346,481

gallons, and in 1885, 346,048 gallons. I quote clear yellow in cisterns £31 12*s.* to £32 per ton of 300 American gallons, freight on board. This time last year the price was £35 7*s.* to £35 18*s.* 6*d.* per ton of 300 American gallons, free on board.

GOODS WITHDRAWN FROM BOND.

The following quantities of articles, subject to duty, were withdrawn from bond and dues paid for local consumption, viz:

Articles.	Quantity.	Articles.	Quantity.
Wheat.....bushels..	910,584	Potatoes.....pounds..	9,265,725
Beans.....do....	120,624	Superior wines.....gallons..	15,356
Indian corn.....do....	2,128	Inferior wines.....do....	2,294,921
Barley.....do....	26,096	Alcohol and spirituous liquors.do....	185,501
Peas.....do....	118,088	Beer.....do....	491,152
Other pulse.....do....	64,536	Bullocks.....head..	12,649
Locust beans.....pounds..	2,121,350	Horses and mules.....do....	543
Cotton seed.....do....	7,475,125	Olive oil.....gallons.	346,481

As our custom-house does not oblige ship agents or importers to specify the contents of each package of goods entered, but allows the entries to be made in many instances under the general term of "merchandise," the foregoing statistics, which are collected privately, may not be exact; however, the totals are more likely to have exceeded than to have been less than the figures given.

I remain, &c.,

C. BREED EYNAUD,
United States Vice-Consul.

It may be of use to American exporters to know the names of the firms which do the largest shipping trade in this island, and therefore I give you the following list of such names, together with the number of steamships which arrived consigned to each firm:

List of firms and number of steamers consigned to them during the year 1886.

Names of firms.	No.	Names of firms.	No.
O. F. Gollcher & Sons	508	A. Von Kohen	22
Smith & Co	489	G. P. Sammut & Co	21
E. T. Agius & Co	489	F. Pace	19
T. G. Micallef & Co	273	To order	14
R. Ferro & Co	202	Strathatos Brothers	12
S. Micallef Eynaud	193	Capt. W. R. Page	10
A. Camilleri	177	J. Azzopardi & Co	6
C. Kirton	164	A. Cachia & Brother	4
R. Denaro	144	S. Vincent & Son	4
G. Xerri	140	E. Sammut	3
F. D. Ancona	135	G. Buttigieg & Sons	2
B. Tagliaferro Sons	109	Petrocochino & Co	2
Walker & Pall	104	D. C. Pitala	2
F. Vella	104	Fell. Agius & Co	1
G. Scicluna & Sons	58	M. di S. Levy	1
M. Azzopardi	49	E. Denicola	1
C. Breed Eynaud	41	Gas Company	1
S. Grech & Co	29		
A. Duncan & Co	26	Total	3,585
C. Lowe	26		

The exports from England to Malta in 1886 amounted to £1,150,000; and the exports from Malta to England amounted to £181,000.

The continued absence of direct steamship communication between Mediterranean ports and United States ports retards the American trade in this sea, largely to the prejudice of American traders. Such American goods as arrive in this island, either for use here or for distribution in neighboring ports, always pay a profit, especially if brought here in direct ships.

I am sorry to have to report that the average quality of refined petroleum imported from the United States was as inferior in 1886 as it was in 1885. The best ("Astral") oil that comes here is too high priced for common use, and the cheaper brands, which are commonly consumed by the islanders, very often very bad, ill-smelling, and affording inferior and imperfect illumination.

The retail trade in American manufactured goods sent here by English merchants, in English bottoms, is large, but might be largely increased, especially in the hardware lines. The extra cost of importing our goods that must be reshipped and recommissioned at English ports in order to get here at all, deters Maltese merchants from directly ordering them. They come in driblets, often on speculation, and lose their nationality when put on the shelves together with similar goods of other origin.

In spite of the existing drawbacks of exporting American goods direct, I believe that there are many articles that might be introduced into Malta with profit to the shippers. Such useful things as platform scales, type-writers, clothes-wringers, and even clothes-pins would find sale here. American organs and melodeons should be more generally introduced, and, when introduced, pushed. Mere introduction of useful goods will not always be followed by profitable trade. Push and patience, backed by capital, of course, are prime factors in business success here as well as in America. The successful way in which scores of American patent medicines have achieved permanent and profitable markets east of Gibraltar might well serve as an example of how to accomplish a desirable end. A few years ago an American tried, in a half-hearted way, to introduce a light iron plow—just the thing needed, too—to the use of the Maltese farmers. He brought the plows here and then sat in his office and dilated on their superiority over the wooden Maltese plow. But words never plowed a farm yet. While he was comfortably expatiating on the merits of the iron plow the Maltese farmer was turning his land with the wooden one. He should have proved by actual work wherein his iron instrument excelled the old-timers. The result was that the American plows never got a grip on Malta soil, and the agriculturists here still carry on their work with primitive means, preserving the customs and habits of their forefathers of very ancient times, for which reason agriculture in Malta requires an impulse and greater encouragement, which an American farmer would designate as a plow and a drag.

The Maltese manufacture all of their own carts and four-wheelers, and boats, which number up into the thousands. I believe the manufacturers of the latest carriage-maker's tools and irons in America would find sale for many of their simplest devices in iron work among these cart and wagon makers. Our sewing-machines ought to be in more extensive use here. So, too, with our specialties in hardware, in photographic apparatus, in shotguns, in saddlery goods, rubber goods, and many American novelties, known and unknown here.

And what I say of the possibilities of an increased trade in American goods in the Maltese islands applies with equal force to the markets of the towns of Northern Africa Lower Italy, and some of the Greek islands.

JOHN WORTHINGTON,
United States Consul.

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